### STEP-5: Fitting Falling-Prevention Wire

• Pass through the falling-prevention wire to the mounting material.



#### STEP-6: Install Telescope Mounting Material

• Pass through the falling-prevention wire to the mounting material.



• Fix the telescope fixing material using two (2) holes of four (2) holes of connection material.







Installation Bottom



Installation Top



### 3.9.4 Instrunction of Telescope

• Look through a telescope, right eye releaf is necessary. Right releaf is 7 to 10 cm.



- For long distance target or enlargement of target, rotate the zoom ring.
- For blurred image, rotate forcus ring



# 3.9.5 Instrunction of Sighting Device

• Look through a telescope, right eye releaf is necessary.

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# 4 Maintenance and Trouble Shooting

# 4.1 Overview

This chapter explains how to do the maintenance of GX4000 link. Main topics covered are;

- Routine Maintenance
- Loopback Function
- ODU Removal for replacement
- ODU replacement
- Firmware update
- Housekeeping
- Cleaning of optical connector

## 4.2 Routine Maintenance

Routine maintenance is carried out by WebLT regularly and monitoring items are as follows;

- Summary
- Radio Performance

#### **Summary**

- Click Summary menu
- Confirm that all Categories are Normal

	Fi	ujitsu Bro	adOne GX4000 Series	s - Ethernet
			[Nakahara001#:]	U
ummary onfiguration	Summary			Auto-refresh 🛄 Refresh
Alam	Alarm Summary			2013 02 05704 32 32+00 0
System	Category		Status	2010/02/00104/02/02/00/
Information	Hardware	Error	Contract -	
• NIP	Radio	Warning		
Ports	Line	Warning	Detail Information	
Security	Clock	Normal	**************************************	
<ul> <li>Switch</li> <li>Users</li> </ul>	Console	Normal		
HTTPS     Access Management	Test Discoverie	e Cummun		
+ SNMP	restablagnostic	s summary		
Spanning rree SyncF	Item	Current		
MAC Table	Radio Loopbac	k -		
VLAN Translation	Line Loophac	Operate		
onitor	Configuration St			
est&Diagnostics	Configuration st	ummary		
aintenance	Target Tx Power	(dBm)	10.0	
	ATPC ATPC Target Px	Power (dPost	Disabled 40.0	
	Route ID	rower (upin)	0	
	<b>BER Alarm Three</b>	hold	1.0E-04	

Alarm Summary Menu

- If Warning and/or Error is issued, click Detail Information button
- Identify the cause from alarm and description list



Monitor > Alarm Sub Menu

No	Category	Cause Factor	Status Description	Level
1		EQPT	Processor Failure	E
2		EQPT	Start-up Failure	E
3		EQPT	Internal Heath Check Failure	E
4		EQPT	Internal Clock Failure	E
5		EQPT	PLL Failure	E
6		EQPT	TX Block Failure	E
7		EQPT	XFP Optical Module Absence	E
8		EQPT	XFP Optical TX Block Failure	E
9		EQPT	SFP Optical TX Block Failure	E
10		EQPT	10G PHY Failure	E
11		EQPT	1G PHY Failure	E
12	Hardwara	EQPT	Internal Data Failure	E
13	Hardware	EQPT	IO Failure	E
14		EQPT	FPGA Upload NG	E
15		EQPT	Software Upload NG	E
16		EQPT	FPGA Image Select NG	E
17		EQPT	FPGA Config Invalid (nStatus/CONF_DONE Invalid)	E
18		EQPT	Internal Power Source Failure	E/W/I
19		EQPT/ENVR	High Temperature	E/I
20		ENVR/ENVR	Laser Temperature High	E/I
21		ENVR	Low Temperature	W/I
22		ENVR	Laser Temperature Low	W/I
23		(MON INFO)	L2SW Failure	W
24		(MON INFO)	FPGA Config RAM CRC Failure	Ι
25		EXT	Sync-E PLL DPLL0 UNLOCK	W
26	Clock	EXT	Sync-E PLL DPLL1 UNLOCK	W
27	CIUCK	EXT	Sync-E PLL DPLL0 HOLDOVER	W
28		EXT	Sync-E PLL DPLL1 HOLDOVER	W

No	Category	Cause Factor	Status Description	Level
29		EQPT	Optical Power Transmitted Out of Range	E
30		EXT	External Clock Degrade on Sync Ethernet Line	W
31		EXT	External Clock Degrade on Sync Ethernet CRPI	W
32		EXT	External Clock Degrade on Sync Ethernet L2SW	W
33		EXT	XFP RX_NR (Any condition leading to invalid data on the RX path)	W
34		EXT	XFP RX_LOSS (mirroring hardware output pin)	I
35		EXT	XFP RX_CDR Unlocked (Unlocked: Loss of Lock of RX side CDR)	W
36		EXT	XFP MOD_NR (Module Not Ready (mirroring hardware output pin)	W
37		EXT	10G PHY SIDE-MAC Transmit FIFO Underrun	W
38		EXT	10G PHY SIDE-Transmit Frame Abort	W
39		EXT	10G PHY SIDE-RX Symbol Error Count	W
40		EXT	10G PHY SIDE-RX Unsupported Opcode Count	W
41	LINE	EXT	10G PHY SIDE-RX CRC Error Count	W
42		EXT	10G PHY SIDE-RX Undersize Count	W
43		EXT	10G PHY SIDE-RX Undersize with CRC Error Count	W
44		EXT	10G PHY SIDE-RX MAC Client Data Length Mismatch Regal Length Field	W
45		EXT	10G PHY SIDE-RX Oversize Count	W
46		EXT	10G PHY SIDE-RX Oversize with CRC Error Count	W
47		EXT	Optical Power Received Degrade	W/I
48		EXT	Optical Power Received Out of Range	W/I
49		EXT	SFP RX_LOSS (RX Loss of Signal, mirroring hardware output pin)	I
50		MON INFO	LINE XAUI Packet Discard	W
51		MON INFO	LINE XAUI Packet Overflow	W
52		MON INFO	Optical Power Transmitted Degrade	W
53		MON INFO	Line Loopback Test	I
54		EXT	External Clock Degrade on Sync Ethernet Radio	W
55		EXT	Radio Overhead Parity Error	W
56		EXT	RF XAUI Packet Discard	W
57		EXT	RF XAUI FCS Error	W
58		EXT	RF XAUI Abnormal Length Packet Discard	W
59		EXT	Radio BER Alarm	W
60		EXT	RS Synchronization Loss	W
61	ITADIO	EXT	RF Power Received Out of Range	W
62		EXT	RF Route ID Fail	W
63		(MON INFO)	RF Power Transmitted Out of Range	W
64		(MON INFO)	Auto Level Control Failure	W
65		(MON INFO)	Auto Gain Control Failure	W
66		(CONT INFO)	Radio Loopback test	I
67		(CONT INFO)	Radio TX OFF Test	I
68		EXT	MII Status Auto-Negotiation Complete NG	W
69		EXT	MII Status Remote Fault	W
70		EXT	MII Status Link Status NG	W
71		EXT	MII Status Jabber Detect	W
72		EXT	1000BASE-T Status Master/Slave Configuration Fault	W
73		EXT	1000BASE-T Status Remote Receiver Staus NG	W
74		EXT	1G-PCS Synchronization Has Been Lost	W
75	Console	EXT	1G-RX Symbol Error Count	W
76		EXT	1G-RX Unsupported Opcode Count	W
77		EXT	1G-RX CRC Error Count	W
78		EXT	1G-RX Undersize Count	W
79		EXT	1G-RX Undersize with CRC Error Count	W
80		EXT	1G-RX MAC Client Data Length Mismatch Regal Length Field	W
81		EXT	1G-RX Oversize Count	W
82		EXT	1G-RX Oversize with CRC Error Count	W

EQPT: Equipment, MON INFO: Monitoring Information, EXT: External E: Error, W: Warning, I: Information

#### **Radio Performance**

- Click Monitor > Radio Performance > Current
- Confirm that Tx Level and Rx Level is within specification

	Fujir	tsu BroadOn	e GX4000 Se []	eries -	G 🕫
Summary     Configuration     Monitor	Monitor > Radio Perform	nance > Current			Auto-refresh 🗍 Refresh
• Alarm	Time	Tx Level (dBm)	Rx Level (dBm)	Radio Link Quality	
<ul> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree</li> <li>MAC Table</li> <li>VLAtis</li> <li>Radio Performance</li> <li>Cuirent</li> <li>15 Minutes</li> <li>12ay</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	2014-06-16T17:13:55+00:00	Lo	-55.5	•	

Radio Performance > Current

Item	Parameter	Specification
Tx Level (dBm)	TX output power	Setting value +/- 3 dB
Rx Level (dBm)	Received Signal Level	System design value +/- 3 dB

- Click Monitor > Radio Performance > 15 Minutes
- Confirm that 15 Minutes radio performance is within specification

		F	ujitsu	Broad	iOne [Naka	GX4000 ahara00	) Series - 01#:]	Ethernet	6 6
Summary     Configuration	itor > R	adio Per	rforman	ce > 15	Minutes		Auto-refr	ash 🗐 Refresh	
Monitor     Alam     System	No	Time	Tx L (dB Min,	evel im) Max.	Rx (d	Level Bm) Max.	Block Errors	Error Seconds	Block Error Ratio
Security     Spanning Tree     MAC Table     VLANs     Radio Performance     Current     15 Minules     1 Day     Test&Diagnostics     Maintenance	L <mark>_ No e</mark>	nines				- 5			

#### Radio Performance > 15 Minutes

ltem		Parameter (15min interval)	Specification
Tx Level (dBm)	Min.	TX power (Min.)	Setting value +/- 3 dB
	Max.	TX power (Max.)	Setting value +/- 3 dB
Rx Level (dBm)	Min.	RSL (Min.)	System design value +/- 3 dB
	Max.	RSL (Max.)	System design value +/- 3 dB
Block Error			0
Error Seconds			0
Block Error Ratio			0

# 4.3 Loopback Function

Two types of loopback function are available:

- Radio side loopback
- Line side loopback

#### Loopback Pont for Ether Interface

Loopback point of GX4000 for Ether interface is as follows;







Line Side Loopback

#### Loopback Pont for CPRI Interface

Loopback point of GX4000 CPRI for Ether interface is as follows;



Radio Side Loopback





# Loopback Procedure

- Click Configuration > MAC Table and set Line and Radio to Disable
- Click Save button

		û ☆ ∰
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	( <del>)</del> 2
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> </ul> </li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Configuration > MAC Table   Aging Configuration   Disable Automatic Aging   Aging Time   300   seconds   MAC Table Learning   Maintenance Line Radio   Auto   Oisable   Oisable </td <td></td>	

- Click Test & Diagnostics > Control
- Click Operate button of Radio LoopBack or Line LoopBack

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	Fujitsu	BroadOn [Na	e GX400 Ikahara0	0 Series 01#:]	- Ether	net	0- 3
<ul> <li>Summary</li> <li>Configuration</li> </ul>	Test & Diagnosti	cs > Control					Refresh
Summary     Configuration     Monitor	Test & Diagnosti	cs > Control Current	Cor	ntrol	Timer		Refresh
Summary     Configuration     Monitor     Test&Diagnostics	Test & Diagnosti Item Radio LoopBack	cs > Control Current	Cor Operate	ntrol Release	Timer 30sec -		Refresh
Summary     Configuration     Monitor     Test&Diagnostics     Control     Ping	Test & Diagnosti Item Radio LoopBack Tx-OFF	cs > Control Current - Tx-OFF	Cor Operate Operate	Release Release	Timer 30sec 🔽		Refresh

# 4.4 ODU Removal for Replacement

Prior to ODU removal, following actions should be taken:

- Record the IP Address information
- Save the Configuration Information to PC
- TX power OFF setting
- DC power supply OFF
- DDU replacement

#### **Record the IP Address Information**

- Open WebLT and Click Configuration > IP
- Record IP Address, IP Mask, IP Router and VLAN ID

(-) (@ http://192.168	.0.10/	× ٹ 🖻 - ک	BroadOne_G	K4000	×	- <b>□ ×</b>
	Fujitsu	BroadOne G [Naka	X4000 Seri hara001#:]	es - E	thernet	0- 3
Summary     Configuration     Alarm	Configuratio	on > System > IP				
= Radio		Configured	Current			
✓ System	<b>DHCP</b> Client		Renew			
<ul> <li>Information</li> </ul>	IP Address	192.168.0.10	192.168.0.10			
• IC • NTP	IP Mask	255.255.255.0	255,255,255,0			
Log Server	IP Router	0.0.0.0	0.0.0.0			
<ul> <li>Ports</li> <li>Security</li> </ul>	VLAN ID	1	1			
- Switch						
Users     HTTPS	Save Rese	et				
<ul> <li>Access Management</li> </ul>	100 C					
SNMP						
SyncE						
<ul> <li>MAC Table</li> </ul>						
VLAN Translation						
VLANS						
<ul> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>						

Configuration > System > IP

### Save the Configuration Information to PC

- Click Maintenance > Configuration > Save
- Click Save Configuration and store to the PC folder.
- Record PC folder name: config\_yyyymmdd\_hhmiss.xml

		<u> </u>
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration <ul> <li>Save</li> <li>Upload</li> <li>Data</li> </ul> </li> </ul></li></ul>	Maintenance > Configuration > Save Save Configuration	

#### **TX Power OFF Setting**

- Click Test & Diagnostics > Control
- Click Operate button of Tx-OFF item

		Q • B	ර 🗙 <i> ලි</i> Broa	dOne_GX400	o ×	<u>ଲି</u> କି କି
	Fujitsu	BroadOn [Na	e GX4000 kahara00	) Series )1#:]	- Etherne	t 🕞 😨
<ul> <li>Summary</li> <li>Configuration</li> </ul>	Test & Diagnosti	cs > Control				Refresh
Monitor	Item	Current	Cont	trol	Timer	
<ul> <li>Control</li> </ul>	Radio LoopBack	5	Operate	Kelease	30sec 💌	
- Ping	Tx-OFF	Tx-OFF	Operate	Release		
Maintenance	Line LoopBack	<u>41</u>	Operate	Release	30sec 🔻	

#### Test & Diagnostics > Control

#### Cable Disconnection from ODU

• Remove PWR, OPT and LAN connectors from ODU

# 4.5 ODU Replacement

Prior to ODU replacement, following action should be taken in regular order:

- Removal/installation of ODU from/to antenna adaptor
- Cable connection
- DC power supply ON
- Download Configuration information to ODU
- TX power ON
- Confirmation of Signal Continuity
- ODU replacement form to Fujitsu Wireless Systems

### **ODU Removal/Installation Procedure**

Please refer to Chapter 2 Site Survey & Installation, Section 2.6 ODU installation.

## **Cable Connection**

• Connect PWR and LAN cables and OPT cable is connected after signal continuity test.

# **DC Power Supply ON**

- Remove PWR connector on ODU
- Set circuit breaker switch for ODU to ON.
- Confirm that DC power supply voltage on PWR connector;

Voltage between Pin-2 (-) and Pin-7 (GND) is -40.5 to -57.0 V

- Set circuit breaker to OFF.
- Connect PWR connector and set circuit breaker to ON

## **Download Configuration Information**

- Open WebLT in accordance with Chapter 5, Section 5.2
- Recorded IP address information as stated Section 4.4 is input.
- Click Maintenance > Configuration > Upload
- Browse recorded save file name and click upload button

		□ □ ×
	Fujitsu BroadOne GX4000 Series - Ether [Nakahara001#:]	net 🕞 😵
Summary     Configuration     Monitor     Test&Diagnostics     Maintenance     Restart Device	Maintenance > Configuration > Upload 参照 Upload	

#### **TX Power ON Setting**

- Click Test & Diagnostics > Control
- Click Release button of Tx-OFF item

ujitsu BroadO	DO CYANO			
[N	lakahara0	0 Series 01#:]	- Ethernet	6 ?
)iagnostics > Contro	ol	atrol	Timer	Refresh
opBack -	Operate	Release	30sec 🔻	
Tx-OFF	Operate	Release		
pBack -	Operate	Release	30sec 💌	
	Diagnostics > Contro m Current DopBack - Tx-OFF DpBack -	Diagnostics > Control m Current Con popBack - Operate Tx-OFF Operate opBack - Operate	Diagnostics > Control m Current Control popBack - Operate Release Tx-OFF Operate Release ppBack - Operate Release	Diagnostics > Control m Current Control Timer popBack - Operate Release 30sec • Tx-OFF Operate Release 30sec •

#### TX Power ON

#### **Confirmation of Signal Continuity**

• Confirm that Radio Performance is normal as shown in Section 4.2 Routine Maintenance, Radio Performance

#### **Connection of Optical Cable**

After completion of signal continuity test, connect optical cable.

#### **ODU Replacement Form**

After replacement of ODU, please send ODU to Fujitsu Wireless Systems.

For quick and adequate repair work, following information is essential to be attached to the ODU.

- Serial No.
- Station name and facing station name
- Frequency band
- Date and time alarm/abnormality detected
- Date and time the ODU replaced
- Detailed description of alarm/abnormality
- Detailed description after ODU replacement

Table 4.5 shows an example of "Faulty Report" format.

### Table 4.5 Faulty ODU Report (Example)

FAULTY ODU REPORT						
Name		Serial No.				
Station Name		Facing Station				
Freq. Band		TX Frequency				
System Configurat	ion					
BB Interface	<ul> <li>Ether 10GbE</li> <li>CPRI RE</li> <li>CPRI REC</li> </ul>	Optional IDU	□ Yes □ No			
If you are returning	an ODU, please fill the bel	ow;				
TX output level (se	etting) = dBm,	RSL (actual) =	dBm			
Environmental con	dition:	Others:				
Date/time Alarm de	etected (mm/dd/yy. hh:mm)					
Date/time ODU rep	placed (mm/dd/yy. hh:mm)					
Details of alarm/sta	atus and other conditions be	fore ODU replaceme	ent			
Details of alarm/sta	Details of alarm/status and other conditions after ODU replacement					
Other comments if	any					
Compiled by		Date (mm/dd/yy)				
Checked by		Date (mm/dd/yy)				
Approved by Date (mm/dd/yy)						

# 4.6 Firmware Update

Update of software firmware and FPGA data are available using on WebLT: For details, refer to Chapter 5 WebLT.

### **Firmware Update**

- Click Maintenance > Software > Upload
- Browse PC folder and click Upload button

🖉 BroadOne_GX4000 - Wi	ndøws Internet Explorer	
<b>30</b> - E	💽 🄄 🔎 Live Search	P -
🚖 Favorites 🏾 🏉 BroadOne_	GX4000	
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	6 3
Summary     Configuration     Monitor     Test&Diagnostics     Maintenance     Restart Device     Factory Defaults     Software     Upload     Image Select     FPGA     Configuration     Data	Maintenance > Software > Upload Browse Upload	

### **FPGA Update**

- Click Maintenance > FPGA > Upload
- Browse PC folder and click Upload button

C BroadOne_GX4000 - Win	dows Internet Explorer	
<b>GO</b> • <b>E</b>	🖌 😽 🔀 👂 Live Search	P -
🚖 Favorites 🏾 🏉 BroadOne_G	X4000	
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	( <del>)</del> 😨
Summary     Configuration     Monitor     Test&Diagnostics     Maintenance     Restart Device     Factory Defaults     Software     Upload     Image Select     FPGA     Upload     Image Select     Configuration     Data	Maintenance > FPGA > Upload Browse Upload	

### 4.7 Housekeeping

Housekeeping items of supervisory and control information can be connected to the external equipment.

### Monitor Cable (MON) Pin Assignment

Table 4.7 shows the pin assignment of MON cable.

Item		GX4000	Side		Ext Equip	oment Side
	Signal	Direction	Connector	Pin No.	Label	Connector
1	CLOSE ALM	-		1	TM1	M4 Crimp
2	OPEN ALM	-		2	TM2	M4 Crimp
3	COMMON	-		3	TM3	M4 Crimp
4	NC	-		4	-	-
5	NC	-		5	-	-
6	NC	-		6	-	-
7	EXT XRST	IN		7	TM5	M4 Crimp
8	SG	-		8	TM6	M4 Crimp

Table 4.7 Pin Assignment of Connector (MON)

### Supervisory (SV) Item Parameter

SV Item	Pin No.	Output device	Condition	Status
PS ALM	1	Photo MOS relay	60V/0.55A	Normal: Open
	4			ALM: Close
TOTAL ALM	2	]		
	5			

#### **Control Item Parameter**

Detailed parameter of Control item is shown below;

CONT Item	Pin No.	Output device	Condition	Status
CPU Reset	7	Photo coupler 6.5 mA No		Normal: Open
	8		/+3.3 V	Reset: Close (*)



**NOTICE:** When short-circuited more than 10 seconds, CPU will be reset after restoring the factory default.

# FUJITSU

# 4.8 Cleaning of Optical Connector

Cleaning of optical connector is carried out below:



Wary sleave







Cleaning stick inserts to the wary sleeve





Cleaning stick penetrates wary sleeve several times without rotation





When cleaning stick do not penetrate, rotates several times in a same direction and take care for wary sleeve damage.

5

# **Network Management Function**

This chapter describes a procedure of network management function for BroadOne GX4000 Impulse radio equipment (Network Element). Two types of NMS functions are available, one is Web-based local terminal and the other is SNMP agent. A user should be familiar with a PC, an operating system, and an application software.

Network Management Function	Description
	Status & Condition, Configuration
Web-based Local terminal (WebLT)	setting & Performance Monitoring by
	Web Browser
SNMP Manager	SNMP agent function due to MIB II

# 5.1 Web-Based LT (WebLT)

#### Outline of Web LT

The Web LT is a local terminal that is the main human machine interface for operation, maintenance, system setup and tune-up. The Web LT is designed as an embedded web server using HTTP (Hyper Text Transfer Protocol) protocol and HTML (Hyper Text Markup Language) document format on an IP (Internet Protocol) network. An operator can manage the GX4000 NE by accessing with ordinary web browser client software. Table 5.2 shows the outline of Web LT major functions.

Table 5.2 Web LT Major Functions

Status & Condition	Display of alarms and conditions of card and system.
Configuration	Setting of system configurations, optional functions and NE parameters.
Monitor	Display of equipment and L2SW monitoring.
Test & Diagnostics	Display of radio performance and analogue monitoring.
Maintenance	Display of History of conditions, download and upload files

#### System Requirements

To use the Web LT, the PC hardware and software should meet or exceed the requirements listed in Table 2.3.

Table 5.3 System Requirements

	HTTP/1.0 or later		
	JavaScript <sup>™</sup> * <sup>1</sup>		
Client Requirements	Cascade Style Sheet (CSS2)		
	Least one working Ethernet port supporting 10/100Base-T		
	1024x768 or 1280x768 XGA Display recommended		
Recommended Browser	Microsoft Internet Explorer <sup>#2, *3</sup> , Version 8.0 or later		
Recommended OS	English version OS		
*1 、	JavaScript is a trademark of Sun Microsystems, Inc., and refers to		
	Sun's Java programming language.		
*2 /	Microsoft Internet Explorer is a trademark of Microsoft Corporation ir		

the United State and/or other countries.

\*3 Set Zoom on View menu to 100% and Security of Internet Option on Tools menu to "Reset all zones to default level".

### **Applicable Character**

ASCII Characters											
Char	HEX	Char	HEX	Char	HEX	Char	HEX	Char	HEX	Char	HEX
(space)	20	0	30	@	40	Р	50	``	60	р	70
!	21	1	31	А	41	Q	51	а	61	q	71
N.A (")	22	2	32	В	42	R	52	b	62	r	72
#	23	3	33	С	43	S	53	С	63	s	73
\$	24	4	34	D	44	Т	54	d	64	t	74
%	25	5	35	ш	45	U	55	е	65	u	75
&	26	6	36	F	46	V	56	f	66	V	76
N.A (')	27	7	37	G	47	W	57	g	67	W	77
(	28	8	38	Н	48	Х	58	h	68	х	78
)	29	9	39	I	49	Y	59	i	69	У	79
*	2A	N.A (:)	ЗA	J	4A	Z	5A	j	6A	Z	7A
+	2B	N.A (;)	3B	K	4B	[	5B	k	6B	{	7B
N.A (,)	2C	N.A (<)	3C	L	4C	N.A (¥)	5C	I	6C		7C
-	2D	=	3D	М	4D	]	5D	m	6D	}	7D
	2E	N.A (>)	3E	N	4E	^	5E	n	6E	1	7E
/	2F	?	3F	0	4F	_	5F	0	6F	N.A (del)	7F

Table 5.4 Applicable Characters

# 5.2 Getting Started with Web LT

### **Connecting PC and NE**

Connect your PC to a LAN port on ODU of the target NE (Network Element). Normally, crossover cable should be used for the connection. Connection is 10Base-T and 100Base-TX Ethernet. It is recommended to use CAT5 (Category 5) UTP (Un-shielded Twisted Pair) crossover cable for the connection. Figure 5.1 shows the connection between the PC and the NE.





#### Web Browser Setting of PC

- 1. Open Internet Web browser, Tool Bar > Internet Option > Connections
- 2. Click LAN settings and all checkmarks will undo and click OK.

Local Area Net	twork (LAN) Settings 🛛 🔀					
Automatic configuration Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration. Automatically detect settings Ise automatic configuration script						
Address	http://pac.proxy.fujitsu.co.jp/proxy					
Proxy server	y server for your LAN (These settings will not apply to PN connections).					
Address;	proxy.css.fujits Port: 8080 Advanced proxy server for local addresses					
OK Cancel						

### **HTTPS Setting of PC**

**NOTICE**: When you can apply HTTPS (Hypertext Transfer Protocol over Security Layer), minimum key length of Web Server Certificate should be changed to **512**. If not, you cannot open WebLT.

In case of Windows 7, key length setting is as follows;

Change of key length:

Execute the following command in the dos prompt screen:

Certutil –setreg chain¥minRSAPubKeyBitLength 512

<u>Restoration of key length</u>: Execute the following command in the dos prompt screen.

#### Certutil –setreg chain¥minRSAPubKeyBitLength 1024

For details, refer to Microsoft Security Advisory URL;

#### http://support.microsoft.com/kb/2661254

### Starting Web LT (\*1)

After making appropriate cable connection to the NE (LAN jack on ODU), you can start Web LT:

- 1. Open your web browser.
- 2. Enter the IP address of the NE as a URL (Uniform Resource Locator) form.

Default IP address of NE:

http://192.0.2.1

https://192.0.2.1 (when HTTPS = enable)

3. "Connect to 192.168.0.10" sub menu appears as an example.

Connect to 192.10	68.0.10	? 🗙
	G	
The server 192.168.0 username and passwo Warning: This server i password be sent in a without a secure conr	), 10 at BroadOne_GX4000 requ ord. is requesting that your usernar an insecure manner (basic authe nection).	iires a ne and entication
<u>U</u> ser name:	2	~
<u>P</u> assword:		
	<u>R</u> emember my password	
	ок с	ancel

Figure 5.2 User name and Password sub menu

4. Input User ID and Password.

Default User ID:	Admin
Default Password:	null

5. When the Web LT successfully accesses to the NE, Web LT Start screen appears.



**NOTE:** IP address of NE and User ID/Password will be able to change in the Configuration Menu on WebLT after first login.

#### Start Screen

The Start Screen displays the NE ID (Network Element Identification) and menus for the NE connected to the Web LT.

~					
( http://192.168.0.10/		+ م	🗟 🖒 🗙 🍯 BroadOne_GX40	00 ×	6 6 😳
	Fujits	u BroadO [N	ne GX4000 Series lakahara001#:]	s - Ethernet	0-3
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> </ul>	Summary Alarm Summary	r.		Auto-refresh 2013-02-	06T08:21:13+00:00
► Maintenance	Category		Status		
	Hardware	error			
	Radio	Warning			
	Line	- Warning	Detail Information		
	Clock	😑 Normal			
	Console	Normal			
	Test&Diagnosti	cs Summary			
	ltem	Current			
	Radio Loopba	ck -			
	Line Loopha	ck -			
	Configuration S	ummary			
	Target Tx Power	(dBm)	10.0		
	ATPC	D (1D )	Disabled		
	ATPC Target Rx	Power (dBm)	-40.0 0		
	BER Alarm Thre	shold	1.0E-04		

Figure 5.3 Web LT Start Screen

This screen is the first window displayed when the NE (ODU unit) is accessed through the Web browser. The window consists of three sections: (1) a banner frame and (2) a menu and main frame.

#### **Banner Frame**

The banner frame displays the NEID, the system name assigned to the NE as an item for the NE Physical Inventory.



			00
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	,P+≣d×	BroadOne_GX4000 ×	0 tr 🖲
	Fujitsu BroadOne [Nakal	GX4000 Series - CPRI nara001#:]	<b>G</b> 6

#### Figure 5.4b Banner Frame for CPRI interface

#### Menu Frame

The menu frame displays the menu links in order to access to the menu of current status (Summary), provisioning menu (Configuration), condition/status/performance (Monitor), maintenance (Test & Diagnostics) and History/Download/Upload a file (Maintenance). In some case, a sub menu will appear in the main frame when a link of the menu item is clicked



**NOTICE:** Two (2) menu frames are available, one is for GX4000 for Ether interface and the other is for GX4000 for CPRI interface as shown in Figure 5.5.



**NOTICE:** Built-in software for Ether or CPRI interface is dependent on GX4000 equipment code. In case that interface is changed Ether to CPRI or CPRI to Ether in future, software and FPGA firmware upload is needed on site.

			× ① ☆ ⑫
	Fujitsu Bro	oadOne GX4000 Series - E [Nakahara001#:]	thernet 🕞 🖓
Summary     Configuration     Alarm     Radio     System     Ports     Security     Spanning Tree     SyncE     MAC Table     VLAN Translation     VLANs     Monitor     Alarm     System     Ports     Security     Spanning Tree     MAC Table     VLANs     Konitor     Alarm     System     Ports     Security     Spanning Tree     MAC Table     VLANs     Radio Performance	Summary Alarm Summary Category Hardware Erro Radio Ward Line Ward Clock Norm Console Norm Test&Diagnostics Summ Test&Diagnostics Summ Item Curd Radio Loopback Radio Tx OFF Ope Line Loopback	Status rr ning Detail Information mal mary rent - erate -	Auto-refresh 🔲 Refresh 2013-02-06T08:27:32+00:00
<ul> <li>Test&amp;Diagnostics         <ul> <li>Control</li> <li>Ping</li> </ul> </li> <li>Maintenance         <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration</li> <li>Data</li> </ul> </li> </ul>	Target Tx Power (dBm) ATPC ATPC Target Rx Power (d Route ID BER Alarm Threshold	10.0 Disabled -40.0 0 1.0E-04	

Figure 5.5a Menu Frame for Ether interface

(-) ( http://192.168	.0.10/	A + 1	さく X 🧉 BroadOne_GX400	0 ×	□ <mark>□ × □</mark> □ □ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
	Fuji	tsu Broad( [N	One GX4000 Serie akahara001#:]	es - CPRI	( <del>]</del> ?
Summary     Configuration     Alarm     Radio     Surfarm	Summary Alarm Summar	У		Auto-refresh 2013-02-	<b>Refresh</b> 08T12:45:20+00:00
<ul> <li>System</li> <li>Security</li> <li>Sync</li> <li>Monitor</li> <li>Alarm</li> <li>System</li> <li>Radio Performance</li> <li>Test&amp;Diagnostics</li> <li>Control</li> <li>Ping</li> <li>Maintenance</li> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration</li> <li>Data</li> </ul>	Category Hardware Radio Line Clock Console Test&Diagnost Radio Loopba Tx OFF Line Loopba Configuration	Error Warning Info Normal Normal ics Summary Current ack - Operate ack - Summary	Status Detail Information		
	Target Tx Powe ATPC ATPC Target R Route ID BER Alarm Thr	er (dBm) x Power (dBm) eshold	10.0 Enabled -40.0 0 1.0E-04		

Figure 5.5b Menu Frame for CPRI interface

If you select a certain menu link, the menu appears in the main frame or subwindow. When you want to transfer to the next menu, you may select the new menu link in the menu frame.

Section 5.3 and 5.4 show the menu tree and menu description.

#### Help Icon

You can click Help button to know well about WebLT menu.



#### Exiting Web LT

You can exit the Web LT by clicking Logout icon or X. This terminates the session between your PC and the NE.



Figure 5.6 Exiting WebLT

# 5.3 Menu Tree & Menu Description for Ether Interface

Menu tree and menu description are shown in Figure 5.7 and Table 5-5.

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Figure 5.7 Menu Tree

Menu	Description
Summary	summary of current alarms
Configuration	Provisioning setting
Alarm	Optical pass through/Link shutdown: Enable/Disable
Radio	TX power/ATPC/ATPC RX threshold/Route ID/BER threshold
System	
Information	System information setting
IP	IP address setting
NTP	NTP configuration, RTC manual setting
Log Server	Server mode/Server address/Syslog level
Ports	Current port configuration
Security	
Switch	
Users	User name/User password/Privilege level
HTTPS	Mode/Automatic Redirect: Enable/Disable
Access Management	Mode: Enable/Disable. Add new entry
SNMP	
System	SNMP mode/Version/Community, SNMP trap configuration
RMON	
History	configure RMON History table
Spanning Tree	
Bridge Setting	configure STP system settings
CIST Ports	user to inspect the current STP CIST port configurations
SvncE	SyncE configuration setting
MAC Table	MAC table configuration setting
VLAN Translation	
Ports to Group Mapping	Configuration setting of "Port to Group Mapping"
VID Translation Mapping	Configuration setting of "VID Translation Mapping"
VLANs	
VLANs Membership	Configuration setting of VLANs membership
Ports	Configuration setting of VLAN ports
Monitor	
Alarm	Alarm monitoring item and item description
System	
Information	Current information of system/hardware/time/SW/FPGA
Log	Current information of system log
Ports	Current information of traffic packet
Traffic Overview	overview of general traffic statistics for all switch ports
Detailed Statistics Ratio	detailed traffic statistics for a specific switch port.
Security	
Access Management	Overview of access management statistics
Statistics	
Switch	
RMON	
Statistics	Overview of RIVION Statistics entries
HISTORY Snonning Tree	Overview of RiviON History entries
Spanning free	detailed information on a single CTD bridge instance
Bridge Status	detailed information on a single STP bridge instance
Port Status	STP CIST port status for physical ports of the switch.
	STP port statistics counters of bridge ports in the switch
VI AN Membershin	Overview of membership status of VI AN usors
VI AN Port	Overview of VLAN port
Radio Performance	
	Current information of Time/Tx level/Rx level
15 Minutes	Historical radio performance data for 15 minutes interval
1 Day	Historical radio performance data for 1 day interval
Test & Diagnostics	
Control	Control of test and diagnosis
Ping	ICMP PING packets to troubleshoot IP connectivity issues
· ··· J	

# Table 5.5 Menu Description for Ether Interface

Menu	Description
Maintenance	
Restart Devices	Restart Devices, Yes/No
Factory Default	Factory Default, Yes/No
Software	
Upload	Firmware Update
Image Select	Software Image Selection
FPGA	
Upload	FPGA upload
Image Select	FPGA image selection
Configuration	
Save	Configuration Save
Upload	Configuration Upload
Data	
CSV Download	CSV download

#### Table 5.5 Menu Description (Cont'd)

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# 5.4 Menu Tree & Menu Description for CPRI Interface

Menu tree and menu description are shown in Figure 5.8 and Table 5-6.



Menu	Description
Summary	summary of current alarms
Configuration	Provisioning setting
Alarm	Optical pass through/Link shutdown: Enable/Disable
Radio	TX power/ATPC/ATPC RX threshold/Route ID/BER threshold
System	
Information	System information setting
IP	IP address setting
NTP	NTP configuration, RTC manual setting
Log Service	Server mode/Server address/Syslog level
Ports	Current port configuration
Security	
Switch	
Users	User name/User password/Privilege level
SNMP	
System	SNMP mode/Version/Community, SNMP trap configuration
Sync	Synchronization configuration setting
Monitor	
Alarm	Alarm monitoring item and item description
System	
Information	Current information of system/hardware/time/SW/FPGA
Log	Current information of system log
Radio Performance	
Current	Current information of Time/Tx level/Rx level
15 Minutes	Historical radio performance data for 15 minutes interval
1 Day	Historical radio performance data for 1 day interval
Test & Diagnostics	
Control	Control of test and diagnosis
Ping	ICMP PING packets to troubleshoot IP connectivity issues.
Maintenance	
Restart Devices	Restart Devices, Yes/No
Factory Default	Factory Default, Yes/No
Software	
Upload	Firmware Update
Image Select	Software Image Selection
FPGA	
Upload	FPGA upload
Image Select	FPGA image selection
Configuration	
Save	Configuration Save
Upload	Configuration Upload
Data	
CSV Download	CSV download

# Table 5.6 Menu Description for CPRI Interface

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# 5.5 WebLT Menu and Description

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Configuration > System > IP	5-20
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Configuration > Security > Switch > SNMP > System	5-28
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C

**NOTICE:** In this section, WebLT menu and screenshot is displayed for GX4000 Ethernet except for Sync menu of GX4000 CPRI.

# **Summary**

(-) (@ http://192.168.	0.10/		,୦ + ଛ ୯ × 🧔 Bro	oadOne_GX4000	×	× · · · · · · · · · · · · · · · ·
	F	ujitsu Bro	adOne GX400 [Nakahara(	)0 Series - E )01#:]	thernet	0- 2
Summary     Configuration     Alarm     Radio	Summary Alarm Summary	1			Auto-refres 2013-02	h 🖾 Refresh -05T04:32:32+00:00
<ul> <li>System</li> <li>Information</li> </ul>	Category	1	Status			
• IP • NTP	Hardware	Error				
Log Server	Radio	Warning				
Ports	Line	Warning	Detail Information			
- Security	Clock	😑 Normal				
Users	Console	😑 Normal				
Access Management     SNMP     Spanning Tree	Test&Diagnostic	s Summary		-		
SyncE	Loophac	k				
MAC Table	Radio Tx OFF	Operate				
VLAN Translation	Line Loopbac	k -				
Monitor     Test&Diagnostics	Configuration Su	ummary				
Maintenance	Target Tx Power	(dBm)	10.0			
	ATPC		Disabled			
	Route ID 0		-40.0			
	BER Alarm Three	hold	1.0E-04			
	94 	(A)	<u>ि तथ</u>			

#### Summary Main Frame

Alarm Summary: This menu shows the summary of current alarms.

Category	:	The category of alarms. The displayed categories are; Hardware: Related to the hardware Radio: Related to the Radio interface Line: Related to the Line interface Clock: Related to the clock synchronization Console: Related to the Console interface
Status	:	The status of current alarms are displayed with 3 levels Error, Warning and info. <b>Error</b> (indicated with red icon): High level problem. Equipment can not work correctly, under this condition. Fatal problem happens on internal device or process. <b>Warning</b> (indicated with yellow icon): Low level problem. Equipment is working. However some problem happens on interface of Radio, Line Clock or Console, otherwise hardware has degradation. <b>Info</b> (indicated with blue icon): Information except Error and Warning to be informed to the operator. If there are no Error, Warning and Info, <b>Normal</b> (indicated with green icon) is displayed

Test & Diagnostics Sup Diagnostics.	mm	<b>ary:</b> This menu shows the summary of current condition of Test and			
Radio loopback	:	Operation of Loopback for RADIO side.			
Radio TX OFF	:	Operation of shut-off for TX output power.			
Line loopback		Operation of Loopback for LINE side.			
Current	:	Indicates current condition. The displayed conditions are; <b>Operate</b> : Operation is active -: Operation is inactive			
Configuration Summary: This menu shows the summary of radio configuration					
Target TX power	:	Current setting of target value for TX output power.			
ATPC	:	Current setting of ATPC. The displayed settings are: Enabled: ATPC is enabled Disabled: ATPC is disabled			
ATPC target RX power	:	Current setting of target value for receiving power upon ATPC. If ATPC is disabled, there is no value.			
Route ID	:	Current setting of root identification number for radio link.			
BER Alarm Threshold		Current setting of BER alarm threshold for radio link			
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.			
Refresh	:	Click to refresh the page			
Detail Information	:	Click to open the detailed alarm list as shown in Figure 1a below.			

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			) × 5 ≅ + Q	🍯 BroadOne_GX	4000 × 命公感
		Fujitsu	BroadOne GX [Nakaha	4000 Seri ra001#:]	es - Ethernet 🛛 🕞 😨
• Summary • Configuration • Alarm • Radio	Monite	or > Alarm			Auto-refresh 🔲 Refresh 2013-02-06T07:58:45+00:00
<ul> <li>System</li> <li>Ports</li> </ul>	No.	Level	Time	Category	Condition Description
Security	1	Warning	2013-02- 06T01:22:01+00:00	Hardware	Internal Power Source Failure
<ul> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs <ul> <li>VLAN Membership</li> <li>Ports</li> </ul> </li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	2	Warning	2013-02- 06T01:21:30+00:00	Radio	RS Synchronization Loss
	3	💛 Warning	2013-02- 06T01:21:21+00:00	Line	MOD_NR(Module Not Ready (mirroring hardware output pin))
	4	- Warning	2013-02- 06T01:21:21+00:00	Line	RX_CDR Unlocked(Unlocked:Loss of Lock of RX side CDR)
	5	lnfo	2013-02- 06T01:21:21+00:00	Line	RX_LOS(RX Loss of Signal (mirroring hardware output pin))
	6	- Warning	2013-02- 06T01:21:21+00:00	Line	RX_NR(Any condition leading to invalid data on the RX path)
	7	Error	2013-02- 06T01:21:20+00:00	Hardware	IO Error
	8	Error	2013-02- 06T01:21:20+00:00	Hardware	Startup Failure
	9	o Info	2013-02- 06T01:21:20+00:00	Line	Optical Power Received Out of Range
	10	lnfo	2013-02- 06T01:21:20+00:00	Line	Optical Power Received Degrade

Detailed Alarm List Screen

# **Configuration**

### **Configuration > Alarm**

(-) @ http://192.168	3.0.10/	タ - ≧ C × 🥔 BroadOne_GX4000	×	- <b>□</b> × ©
	Fujitsu l	BroadOne GX4000 Series - [Nakahara001#:]	Ethernet	0 2
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarmi</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTP</li> <li>Log Server</li> </ul> </li> <li>Ports</li> <li>Security</li> <li>Switch <ul> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> </ul> </li> <li>Spanning Tree <ul> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> </ul> </li> <li>Monitor <ul> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul> </li> </ul>	Configuration > Alarm Optical Link Pass Through Optical Link Shutdown Save Reset	Enabled T Disabled T		

Configure > Alarm Menu Frame

Configuration > Alarm:		
Optical Link Pass Through	:	The Optical Link Pass Through is the function that carry the condition of own optical link down to opposite side optical link through the radio link. Set the Optical Link Pass Through. Possible settings are: <b>Enabled</b> : Optical Link Pass Through is enabled <b>Disabled</b> : Optical Link Pass Through is disabled
Optical Link Shutdown	:	The Optical Link Shutdown is the function that automatically shuts off the optical output according to the loss of radio link. Set the Optical Link Shutdown. Possible settings are: <b>Enabled</b> : Optical Link Shutdown is enabled <b>Disabled</b> : Optical Link Shutdown is disabled
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values
# Configuration > Radio

C- () ( http://192.168	.0.10/		×	
	Fujitsu Bro	oadOne GX4000 Series - I [Nakahara001#:]	Ethernet	( <del>)</del> ?
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTP</li> <li>Log Server</li> <li>Ports</li> <li>Security</li> <li>Switch</li> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul></li></ul>	Configuration > Radio Target Tx Power (dBm) ATPC ATPC Target Rx Power (dBm) Route ID BER Alarm Threshold Save Reset	10.0 ▼ Disabled ▼ -40.0 ▼ 0 ▼ 1.0E-04 ▼		

Configuration > Radio Menu Frame

# Configuration > Radio:

Target Tx Power	:	The Target Tx Power is the target TX output power of transmitter. Set to <b>0.0</b> (0 dBm) to <b>10.0</b> (+10 dBm) with <b>0.5</b> step. The default value is 10.0 (+10 dBm).
ATPC	:	The Automatic Transmit Power Control is the function that adjust TX output power automatically by detecting far-end receiver signal level (RSL) threshold. Possible settings are: <b>Enabled</b> : ATPC is enabled <b>Disabled</b> : ATPC is disabled (default)
ATPC Target Rx power	:	The ATPC Target Rx Power is target value of far-end RSL threshold when ATPC is enabled. Set to <b>-30.0</b> (-30 dBm) or <b>-40.0</b> (-40 dBm).The default value is -40.0 (-40 dBm).default value is -40.0 (-40 dBm).IfATPC is disabled, it cannot activate. Default is -40.
Route ID	:	The Route ID is the function that identifies the number for radio link to detect the interference with undesired radio signals. Same Route ID must be set on both of equipment that connected by a radio link. If there is different Route ID, "RF Route ID Fail" happens. Set to <b>0</b> to <b>15</b> . The default value is 0
BER Alarm Threshold	:	The BER Alarm Threshold is defined the threshold to initiate "Radio BER Alarm". Set to <b>1.0E-03</b> , or <b>5.0E-04</b> , or <b>1.0E-04</b> , or <b>5.0E-05</b> , or <b>1.0E-05</b> , or <b>5.0E-06</b> , or <b>1.0E-06</b> . The default value is 1.0E-04.
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > System

# Configuration > System > Information

A (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	.10/ ・ 図 C ×	BroadOne_GX4000 ×	
	Fujitsu BroadOne GX [Nakah	(4000 Series - Ethernet ara001#:]	0-3
Summary     Configuration     Alarm	Configuration > System > Infor	mation	
Radio	System Contact	Nakahara:	
✓ System	System Name	Nakahara001-2F	
<ul> <li>Information</li> <li>IP</li> </ul>	System Location	Nakahara001#:	
NTP	System Timezone Offset (minutes)	0	
Log Server     Porte	Site Code	a1-2:	
- Security	Equipment Code	b-2:	
- Switch	Local No.	c1-2:	
Users     HTTPS	Resource State	d1-2:	
Access Management	Equipment Note	e1-2:	
<ul> <li>Spanning Tree</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Save Reset		19



# Configuration > System > Information:

System Contact	:	The textual identification of the contact person. The allowed string length is 0 to 255 and the allowed content is the ASCII characters from 32 to 126.
System Name	:	An administratively assigned name for this radio system. Allowable character is a text string drawn from the alphabet (A-Za-z), digits (0-9), minus sign (-). No space characters are permitted as part of a name. The first character must be an alpha character. And the first or last character must not be a minus sign. The allowed string length is 0 to 255.
System Location	:	The physical location of this site (e.g., telephone closet, 3rd floor). The allowed string length is 0 to 255, and the allowed content is the ASCII characters from 32 to 126
System Timezone offset	:	Provide the time zone offset relative to UTC/GMT. The offset is given in minutes east of GMT. The valid range is from -720 to 720 minutes.
Site Code	:	Site code where equipment is set up, max. 9 alphanumeric characters
Equipment Code	:	Equipment code, maximum 5 alphanumeric characters.
Local Number	:	User managed serial number, max. 6 alphanumerical characters
Resource State	:	NE release-build status, max. 6 alphanumerical characters
Equipment Note	:	Equipment note, max. 60 alphanumerical characters
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > System > IP

C ( http://192.168.	×ې⊠ - ک	BroadOne_G	X4000 ×	- □ × ⊙	
	Fujitsu	BroadOne G [Naka	X4000 Seri hara001#:]	es - Ethernet	6
Summary     Configuration	Configuratio	n > System > IP		~	
Alarm     Padio		Configured	Current		
✓ System	<b>DHCP Client</b>		Renew		
<ul> <li>Information</li> </ul>	IP Address	192.168.0.10	192.168.0.10		
• NTP	IP Mask	255.255.255.0	255.255.255.0		
Log Server     Dorte	IP Router	0.0.0.0	0.0.0		
<ul> <li>✓ Security</li> </ul>	VLAN ID	1	1		
✓ Switch     ■ Users     ■ HTTPS	Save Rese	et	-H	1	
<ul> <li>Access Management</li> <li>SNMP</li> </ul>					
Spanning Tree					
SyncE     MAC Table					
VLAN Translation					
► VLANs					
Monitor					
Maintenance					

Configuration > System > IP

## Configuration > System > IP:

Configure the switch-managed **IP** information on this page. The **Configured** column is used to view or change the IP configuration. The **Current** column is used to show the active IP configuration.

DHCP Client	:	Not supported. "Disable" is always set.
IP Address	:	Set the IP address of this switch in <u>dotted decimal notation</u> . Default is 192.0.2.1
IP Mask	:	Set the IP mask of this switch <u>dotted decimal notation</u> . Default is 255.255.255.0
IP Router	:	Set the IP address of the router in <u>dotted decimal notation</u> . Default is 0.0.0.0
VLAN ID	:	Provide the managed <u>VLAN</u> ID. The allowed range is 1 to 4095. Default is 1 <u>Note</u> : When functioning, CPRI is not displayed.
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > System > NTP

C S Attp://192.168	.0.10/ ・ こく (G) BroadOne_GX4000 × 10 公 (G)
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTF</li> <li>Log Server</li> <li>Ports</li> <li>Security</li> <li>Switch <ul> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> </ul> </li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> </ul> </li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Configuration > System > NTP NTP Configuration Mode Disabled  Server 1 Server 2 Save Reset RTC Manual Set Current Date: 2013-02-05T05:10:02+00:00 Year Mon. Day Hour Min. Sec. Set Clear

Configuration > System > NTP

NTP Configuratio	<u>n:</u>	
Mode	:	Indicates the NTP mode operation. Possible modes are: <b>Enabled</b> : Enable NTP mode operation. When NTP mode operation is enabled, the agent forwards NTP messages between the clients and the server when they are not on the same subnet domain. <b>Disabled</b> : Disable NTP mode operation.
Server1/2	:	Provide the NTP IPv4 address of this switch. Default is null.
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values
RTC Manual Set:		
Mode	:	Set the date and time. The input items are: Year: Input year. (allowed range: 2012-2037) Mon.: Input month. (allowed range: 1-12) Day: Input day. (allowed range: 1-31) Hour: Input hour. (allowed range: 0-23) Min.: Input minute. (allowed range: 0-59) Sec.: Input second. (allowed range: 0-59)
Set	:	Input date and time are set
Clear	:	The input items are emptied

# Configuration > System > Log Server

(-) (# http://192.168	3.0.10/	P - ⊠¢×	BroadOne_GX4000	×	
	Fujitsu E	BroadOne G [Nakah	X4000 Series - ara001#:]	Ethernet	6
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTP</li> <li>Log Server</li> <li>Ports</li> <li>Security</li> <li>Switch</li> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> </ul> </li> </ul>	Configuration Server Mode Server Address Syslog Level Save Reset	> System > Log Disabled Error,Warning,Inf	Server		

Configuration > System > Log Server

## Configuration > System > Log Server:

Server Mode	:	Indicates the server mode operation. When the mode operation is enabled, the syslog message will send out to syslog server. The syslog protocol is based on UDP communication and received on UDP port 514 and the syslog server will not send acknowledgments back sender since UDP is a connectionless protocol and it does not provide acknowledgments. The syslog packet will always send out even if the syslog server does not exist. Possible modes are: Enabled: Enable server mode operation. Disabled: Disable server mode operation. (default)
Server Address	:	Indicates the IPv4 host address of syslog server. If the switch provide DNS feature, it also can be a host name. Default is null.
Syslog Level	:	Indicates what kind of message will send to syslog server. Possible modes are: Error, Warning, Info: Send information, warnings and errors. Error, Warning: Send warnings and errors. Error: Send errors.
Save Button	:	Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > Port (Only applicable for Ether)

A http://192.168.0.10/		٩	- 2 C × (	BroadOne_GX4000	×	- □ × ⋒ ☆ ©
	Fujitsu	Broad	dOne GX4 [Nakaha	4000 Series - ra001#:]	Ethernet	6 ?
Summary     Configuration	Configuratio	on > Por	ts			Refresh
<ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> </ul>	Port	Status	Maximum Frame Size (byte)			
■ IP - NTP	Radio	ODown	10056			
Log Server	Line	ODown	10056			
Ports	Maintenance	🔵 Up	10056			
Switch Users Users Users Source Synce MAC Table VLAN Translation VLANs Monitor Test&Diagnostics Maintenance	Save Res	et				

## Configuration > Port

<u>Configuration > Port:</u> This menu displays current port configurations. Ports can also be configured here.

Port	:	This is the port name for this row
Status	:	The current link state is displayed graphically. Green indicates the link is up and no colour that it is down.
Maximum Frame Size Save Button	:	Enter the maximum frame size allowed for the switch port, including FCS. Line port maximum frame size: 1518 to 10056, default is 10056 Radio port maximum frame size: 1518 to 10056, default is 10056 Maintenance port maximum frame size: 1518 to 10056, default is 10056 Click to save changes
Reset Button	:	Click to undo any changes made locally and revert to previously saved
Refresh Button		Click to refresh the page. Any changes made locally will be undone

# **Configuration > Security**

# Configuration > Security > Switch > User

			x
(C) (E) (E) http://192.168.0	0.10/ ♀ ≅ ♂ ×	<i>叠</i> BroadOne_GX4000 × 🔐 份 😭	- <u>(</u> )
	Fujitsu BroadOne G) [Nakah	(4000 Series - Ethernet ara001#:]	?
Summary     Configuration	Configuration > Security > Switch	n > Users	
<ul> <li>Radio</li> </ul>	User Name	Privilege Level	
✓ System	admin	3:Monitor, Lest&Diagnostics,Maintenance,Configuration	
<ul> <li>Imormation</li> <li>IP</li> </ul>	diag	2:Monitor,Test&Diagnostics	
• NTP	1	1:Monitor	
Log Server	1_Monitor	3:Monitor, Test&Diagnostics, Maintenance, Configuration	
= POILS	a1234567890123456789012345678901	3:Monitor, Test&Diagnostics, Maintenance, Configuration	
Security Switch	Add New User		
<ul> <li>Access Management</li> </ul>			
► SNMP			
Spanning Tree			
MAC Table			
VI AN Translation			
VLANs			
▶ Monitor			
Test&Diagnostics			
http://192.168.0.10/navbar.htm	m#		

Configuration > Security > Switch > User main Frame

# Configuration > Security > Switch > User:

This menu provides an overview of the current users. Currently the only way to login as another user on the web server is to close and reopen the browser. The displayed values for each user are:

User Name	:	The name identifying the user. This is also a link to <u>Add/Edit User.</u>
Privilege Level	:	<ul> <li>The privilege level of the user. The allowed range is 1 to 4.</li> <li>The operation allowed at each privilege level is the following:</li> <li>1: Monitor</li> <li>2: Monitor, Test &amp; Diagnostics</li> <li>3: Monitor, Test &amp; Diagnostics, Maintenance, Configuration</li> <li>4: Monitor, Test &amp; Diagnostics, Maintenance, Configuration, Telnet</li> </ul>
Add New User	:	Click to add a new user and Add User frame will appear.

(C) (S http://192.168.	0.10/	- ■ × í
	Fujitsu BroadOne GX4000 Series - Ethe [Nakahara001#:]	rnet 🕞 😨
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTP</li> <li>Log Server</li> <li>Ports</li> <li>Security</li> <li>Switch</li> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul></li></ul>	Add User          User Name         Password         Password (again)         Privilege Level         1:Monitor         Save         Reset         Cancel	

#### Add User Sub Frame

Add User:		
User Name	:	A string identifying the user name that this entry should belong to. The allowed string length is 1 to 32. The valid user name is a combination of letters, numbers and underscores.
Password	:	The password of the user. The allowed string length is 0 to 32.
Password again	:	
Privilege Level	:	The privilege level of the user. The allowed range is 1 to 3. The operation allowed at each privilege level is the following: 1: Monitor 2: Monitor, Test & Diagnostics 3: Monitor, Test & Diagnostics, Maintenance, Configuration
Save button	:	Click to save changes
Reset button	:	Click to undo any changes made locally and revert to previously saved values
Cancel button	:	Click to undo any changes made locally and return to the Users.
Delete User		Delete the current user. This button is not available for new configurations (Add new user)

# Configuration > Security > Switch > HTTPS (Only applicable for Ether)

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C 6 http://192.168	.0.10/	- □ × ○ ೧ ☆ છ
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0- 3
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Information</li> <li>IP</li> <li>NTP</li> <li>Log Server</li> <li>Ports</li> <li>Security</li> <li>Switch</li> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> </ul> </li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Configuration > Security > Switch > HTTPS Mode Enabled Automatic Redirect Disabled Save Reset	

Configuration > Security > Switch > HTTPS Main Frame

## Configuration > Security > Switch > HTTPS:

Mode	:	Indicates the HTTPS mode operation. When the current connection is HTTPS, to apply HTTPS disabled mode operation will automatically redirect web browser to an HTTP connection. Possible modes are: <b>Enabled</b> : Enable HTTPS mode operation. <b>Disabled</b> : Disable HTTPS mode operation.
Automatic Redirect	:	Indicates the HTTPS redirect mode operation. It only significant if HTTPS mode "Enabled" is selected. Automatically redirects web browser to an HTTPS connection when both HTTPS mode and Automatic Redirect are enabled or redirects web browser to an HTTP connection when both are disabled. Possible modes are: <b>Enabled</b> : Enable HTTPS redirect mode operation. <b>Disabled</b> : Disable HTTPS redirect mode operation.
Save button	:	Click to save changes
Reset button	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > Security > Switch > Access Management (only applicable for Ether)



#### Configuration > Security > Switch > Access Management Main Frame

#### Access Management:

The maximum number of entries is **16**. If the application's type match any one of the access management entries, it will allow access to the switch.

Mode	:	Indicates the access management mode operation. Possible modes are: <b>Enabled</b> : Enable access management mode operation. <b>Disabled</b> : Disable access management mode operation.
Delete	:	Check to delete the entry. It will be deleted during the next save.
Start IP Address	:	Indicates the start IP address for the access management entry.
End IP Address	:	Indicates the end IP address for the access management entry.
HTTP/HTTPS	:	Indicates that the host can access the switch from HTTP/HTTPS interface if the host IP address matches the IP address range provided in the entry.
SNMP	:	Indicates that the host can access the switch from SNMP interface if the host IP address matches the IP address range provided in the entry.
Add New Entry	:	Click to add a new access management entry.
Save	:	Click to save changes
Reset	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > Security > Switch > SNMP

# Configuration > Security > Switch > SNMP > System

S → (2) http://192.168.0.10/			🏾 🗙 🌔 🎯 Br	oadOne_GX4000	×	6 2 2
	Fujitsu E	BroadOne [Na	e GX40( kahara(	)0 Series - E )01#:]	Etherne	<sup>t</sup> (}- ?
Summary     Configuration	Configuration >	Security > S	witch > S	NMP > System		
Alarm     Padio	Mode	Enabled				
✓ System	Version	SNMP v2c				
<ul> <li>Information</li> </ul>	Read Community	public				
• IP • NTP	Write Community	private				
✓ Security ✓ Switch ■ Users	SNMP Trap Conf	iguration				
HTTPS     Access Management	Trap Mode		Disabled		•	
■ Access management	Trap Version		SNMP v2c			
System	Trap Community		public			
Spanning Tree	Trap Destination A	ddress				
SyncE	Trap Authenticatio	n Failure	Enabled			
<ul> <li>MAC Table</li> </ul>	Trap Link-up and L	ink-down	Enabled		•	
VLAN Translation	Trap Inform Mode		Enabled			
	Trap Inform Timeo	ut (seconds)	1			
▶ Test&Diagnostics	Trap Inform Retry	limes	5			
▶ Maintenance	Save Reset					

Configuration > Security > Switch > SNMP > System Main Frame

## <u>Configuration > Security > Switch > SNMP > System:</u>

Mode	:	Indicates the SNMP mode operation. Possible modes are: Enabled: Enable SNMP mode operation. Disabled: Disable SNMP mode operation.
Version	:	Indicates the SNMP supported version. Possible versions are: <b>SNMP v2c</b> : Set SNMP supported version 2c.
Read Community	:	Indicates the community read access string to permit access to SNMP agent. The allowed string length is 0 to 255, and the allowed content is the ASCII characters from 33 to 126.
		The field is applicable only when SNMP version is SNMPv2c. It provides more flexibility to configure security name than a SNMPv2c community string. In addition to community string, a particular range of source addresses can be used to restrict source subnet.
Write Community	:	Indicates the community write access string to permit access to SNMP agent. The allowed string length is 0 to 255, and the allowed content is the ASCII characters from 33 to 126.
		The field is applicable only when SNMP version is SNMPv2c. It provides more flexibility to configure security name than a SNMPv2c community string. In addition to community string, a particular range of source addresses can be used to restrict source subnet.

# SNMP Trap Configuration:

Trap Mode	:	Indicates the SNMP trap mode operation. Possible modes are: Enabled: Enable SNMP trap mode operation. Disabled: Disable SNMP trap mode operation.
Trap Version	:	Indicates the SNMP trap supported version. Possible versions are: <b>SNMP v2c</b> : Set SNMP trap supported version 2c.
Trap Community	:	Indicates the community access string when sending SNMP trap packet. The allowed string length is 0 to 255, and the allowed content is ASCII characters from 33 to 126.
Trap Destination Address	:	Indicates the SNMP trap destination address. It allows a valid IP address in dotted decimal notation ('x. y. z. w').
Trap Authentication Failure	:	Indicates that the SNMP entity is permitted to generate authentication failure traps. Possible modes are: <b>Enabled</b> : Enable SNMP trap authentication failure. <b>Disabled</b> : Disable SNMP trap authentication failure.
Trap Link-up and Link-down	:	Indicates the SNMP trap link-up and link-down mode operation. Possible modes are: Enabled: Enable SNMP trap link-up and link-down mode operation. Disabled: Disable SNMP trap link-up and link-down mode operation.
Trap Inform Mode	:	Indicates the SNMP trap inform mode operation. Possible modes are: Enabled: Enable SNMP trap inform mode operation. Disabled: Disable SNMP trap inform mode operation.
Trap Inform Timeout (sec)	:	Indicates the SNMP trap inform timeout. The allowed range is <b>0</b> to <b>2147</b> .
Trap Inform Retry Times	:	Indicates the SNMP trap inform retry times. The allowed range is <b>0</b> to <b>255</b> .
Save	:	Click to save changes
Reset		Click to undo any changes made locally and revert to previously saved values

Configuration > Security > Switch > SNMP > RMON (Only applicable for Ether)

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# Configuration > Security > Switch > SNMP > RMON > History

		-	Stoler Q	BroadOne_GX4000	×		
Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]							
Summary     Configuration     Alarm     Radio	Conf	iguration > Se Port	ecurity > Switch >	SNMP > RMON Buckets	> History Buckets Granted		
<ul> <li>System</li> <li>Information</li> </ul>	1	Radio	1800	50	50		
• IP • NTP	2	Line	1800	50	50		
Log Server     Ports	3	Maintenance	1800	50	50		
<ul> <li>Switch         <ul> <li>Users</li> <li>HTTPS</li> <li>Access Management</li> <li>SNMP                 <ul> <li>System</li> <li>RMON</li> <li>History</li> </ul> </li> <li>Spanning Tree                     <ul></ul></li></ul></li></ul>							
<ul> <li>VLANS</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>							

Configuration > Security > Switch > SNMP > RMON > History Main Frame

## Configuration > Security > Switch > RMON > History:

This menu is to configure RMON History table. The entry index key is ID. ID Indicates the index of the entry. The range is from 1 to 65535 Port Indicates the port name which wants to be monitored Interval Indicates the interval in seconds for sampling the history statistics data. The range is from 1 to 3600, default value is 1800 seconds. **Buckets** Indicates the maximum data entries associated this History control entry stored in : RMON. The range is from 1 to 3600, default value is 50. **Buckets Granted** The number of data shall be saved in the RMON : Save Click to save changes Reset Click to undo any changes made locally and revert to previously saved values

## Configuration > Spanning Tree (Only applicable for Ether)

# Configuration > Spanning Tree > Bridge Setting

			Fujitsu BroadOne GX4000 Series - Ethernet [Ether70G-3]	G 6
• Summary • Configuration • Augrit • Flucto	Configuration > Span	ning Tree > Br	idge Settings	
<ul> <li>System</li> <li>Ports</li> </ul>	Pretorni Venion	STP 💌	1	
<ul> <li>Security</li> </ul>	Buildge Priority	32768 -		
<ul> <li>Spansing Tree</li> </ul>	Forward Delay	15		
Bodge Settings     Elit Parts	Max Ape	20		
•Synce	Maximum Hop Count	20		
MAC Table     VLAN Translation	Transmit Hold Count	6		
+ VEAN: • Monitar	Advected Entrus			
+ Test&Diagnostics	Edge Port BPDO Filteri	ing 👘		
• Maintenance	Edge Pert BPDU Guard	•		
	Port Error Recovery	E1		
	Part Error Receivery Th	meent		

Save Reset

Configuration > Spanning Tree > Bridge Setting Main Frame

<u>Configuration > Spanning Tree > Bridge Setting</u>: This menu allows you to configure STP system settings. The settings are used by all STP Bridge instances in the Switch

#### **Basic Setting:**

Protocol Version	:	The STP protocol version setting. Valid values are STP & RSTP Default is STP.
Bridge Priority	:	Controls the bridge priority. Lower numeric values have better priority. The bridge priority plus the MSTI instance number, concatenated with the 6-byte MAC address of the switch forms a <i>Bridge Identifier</i> .
Forward Delay	:	The delay used by STP Bridges to transit Root and Designated Ports to Forwarding (used in STP compatible mode). Valid values are in the range 4 to 30 seconds. Default is 15.
Max Age	:	The maximum age of the information transmitted by the Bridge when it is the Root Bridge. Valid values are in the range 6 to 40 seconds, <i>and</i> Max Age must be <= (FwdDelay-1)*2. Default is 20.
Maximum Hop Count	:	This defines the initial value of remaining Hops for MSTI information generated at the boundary of an MSTI region. It defines how many bridges a root bridge can distribute its BPDU information to. Valid values are in the range 6 to 40 hops. Default is 20.
Transmit Hold Count	:	The number of BPDU's a bridge port can send per second. When exceeded, transmission of the next BPDU will be delayed. Valid values are in the range 1 to 10 BPDU's per second. Default is 6.

Edge Port BPDU Filtering	:	Control whether a port <i>explicitly</i> configured as <b>Edge</b> will transmit and receive BPDUs. Default is not clicking.
Edge Port BPDU Guard	:	Control whether a port <i>explicitly</i> configured as <b>Edge</b> will disable itself upon reception of a BPDU. The port will enter the <i>error-disabled</i> state, and will be removed from the active topology. Default is not clicking.
Port Error Recovery	:	Control whether a port in the <i>error-disabled</i> state automatically will be enabled after a certain time. If recovery is not enabled, ports have to be disabled and re-enabled for normal STP operation. The condition is also cleared by a system reboot. Default is not clicking.
Port Error Recovery Timeout	:	The time to pass before a port in the <i>error-disabled</i> state can be enabled. Valid values are between 30 and 86400 seconds (24 hours). Default is null.
Save		Click to save changes
Reset		Click to undo any changes made locally and revert to previously saved values

#### Advanced Setting:

## Configuration > Spanning Tree > CITS Ports



Configuration > Spanning Tree > CIST Ports Main Frame

**Spanning Tree > CIST Ports:** This menu allows the user to inspect the current STP CIST port configurations, and possibly change them as well. This menu contains settings for physical and aggregated ports.

Port	:	The port name of the logical STP port
STP Enables	:	Controls whether STP is enabled on this port
Save	:	Click to save changes
Reset		Click to undo any changes made locally and revert to previously saved values

# Configuration > SyncE (Only applicable for Ether)

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		Fujit	tsu Bro	oadOr [N	ne GX4000 akahara00	Series - Ethe 1#:]	ernet		(}- @
Summary     Configuration     Alarm     Radio     System     Ports     Security     Spanning Tree     SyncE     MAC Table     VLAN Translation     VLANs	Configuration > Sy Note: The configuration "Maintenance > Configu Clock Source Nomin Clock Source Nomin 1 2	vncE s on this pa ration > Sa nation and minated	ege are sav ive` d State Port P Line Radio	ed in the riority	flash memory, bu SSM Overwriti QL NONE	e Hold Off Disabled Disabled	a XML file whic	SSM WTR	Refresh d by Clear WTR none • none •
Monitor Test&Diagnostics Maintenance	Mode       Forced Free Run *       Save       Reset       SyncE Ports       Port       SSM Enable       Radio       Line	Source	WTR Tir 5M	me SS	M Hold Over	QL NONE	Sta Free	te Clock S Run	iource   LOL

Configuration > SyncE Main Frame

## **Clock Source Nomination and Status:**

Clock Source	:	This is the instance number of the clock source. This has to be referenced when selecting 'Manual' Mode
Nominated	:	When a clock source is nominated, the clock output from the related $\underline{PHY}$ (Port) is enabled against the clock controller. This makes it available as a possible source in the clock selection process.
Port	:	The ports that are possible to select for this clock source, is presented.
Priority	:	The priority for this clock source. Lowest number (0) is the highest priority. If two clock sources have the same priority, the lowest clock source number gets the highest priority in the clock selection process. (Future support)
SSM Overwrite	:	A selectable clock source Quality Level <u>(QL)</u> to overwrite any QL received in a <u>SSM</u> . If QL is not Received in a SSM (SSM is not enabled on this port), the SSM Overwrite QL is used as if received. The SSM Overwrite can be set to QL_NONE, indicating that the clock source is without any know quality (Lowest compared to clock source with known quality)
Hold Off	:	The Hold Off timer value. Active loss of clock Source will be delayed the selected amount of time. The clock selector will not change clock source if the loss of clock condition is cleared within this time (Future support)
LOCS	:	Signal is lost on this clock source
SSM	:	If SSM is enabled and not received properly. Type of SSM fail will be indicated in the 'Rx SSM' field
WTR	:	Wait To Restore timer is active.
Clear WTR	:	Clears the WTR timer and makes this clock source available to the clock selection process.

#### Clock Selection Mode and Status

Mode	:	The definition of the 'best' clock source is firstly the one with the highest (QL) and secondly (the ones with equal QL) the highest priority. Clock Selector can be in different modes: <b>Manual:</b> Clock selector will select the clock source stated in Source (see below). If this manually selected clock source is failing, the clock selector will go into holdover state. <b>Force Hold Over:</b> Clock Selector is forced to Free Run State. <b>Force Free Run:</b> Clock Selector is forced to Free Run State. The mode transition from "Force Free Run" to "Force Hold Over" is not allowed (The message of INVALID_PARAMETER is displayed). (Default is Force Free Run.)
Source	:	Only relevant if Manual mode is selected (see above).
WTR Time	:	Wait To Restore timer value in minutes. The WTR time is activated on the falling edge of a clock source failure. This means that the clock source is first available for clock selection after WTR Time (can be cleared). Set WTR Time from Disable, 1M to 12M, 1 minute step.
SSM Holdover	:	Transmitted SSM QL value when clock selector is in Hold Over State. Set SSM Holdover from QL NONE, QL PRC, QL SSUA, QL SSUB, QL ECC2, QL ECC1, QL DNU and QL INV. (Default is QL NONE.)
SSM Free Run	:	This is the transmitted SSM QL value when clock selector is in Hold Over State. Set SSM Free Run from QL NONE, QL PRC, QL SSUA, QL SSUB, QL ECC2, QL ECC1, QL DNU and QL INV. (Default is QL NONE.)
Status	:	This is indicating the state of the clock selector. Possible states are:
		<b>Free Run:</b> There are no external clock sources to lock to (unlocked state). The Clock Selector has never been locked to a clock source long enough to calculate the hold over frequency offset to local oscillator. The frequency of this node is the frequency of the local oscillator.
		<b>Hold Over:</b> There are no external clock sources to lock to (unlocked state). The Clock Selector has calculated the holdover frequency offset to local oscillator. The frequency of this node is hold to the frequency of the clock source previous locked to.
		Locked: Clock selector is locked to the clock source indicated (See next).
Clock Source	:	The clock source locked to when clock selector is in locked state.
LOL	:	Clock selector has raised the Los Of Lock alarm
SyncE Port		
Port	:	The port number to configure.
SSM Enabled	:	Enable and disable of <u>SSM</u> functionality on this port.
TX SSM	:	Monitoring of the transmitted SSM <u>QL</u> on this port. Transmitted QL should be the Quality Level of the clock generated by this node. This means the QL of the clock source this node is locked to

RX SSM:Monitoring of the received SSM QL on this port. If link is down on port,<br/>QL\_LINK is indicated. If no SSM is received, QL\_FAIL is indicatedRefreshClick to refresh the pageSaveClick to save changesResetClick to undo any changes made locally and revert to previously saved<br/>values

# Configuration > Sync (Only applicable for CPRI)

	© × 2 ₪ + Q	BroadOne_GX4000 ×	
	Fujitsu BroadOne GX [Nakahar	(4000 Series - CPRI a001#:]	6
Summary     Configuration     Alarm     Radio     System     Security     Sync	Configuration > Sync Note: The configurations on this page are save which is downloaded by "Maintenance > Config Clock Source Nomination and State	d in the flash memory, but can not be sav juration > Save".	Refresh red to a XML file
Monitor     Test&Diagnostics	Clock Source Nominated Port	LOCS	
Maintenance	2 🗖 Radio		
	Clock Selection Mode and State		
	Mode Source State	Clock Source LOL	
	undefined 1 💌 Free Run		
	Save Reset		

Configuration > Sync Main Frame

<u>Clock Source Nomination and Status:</u> This menu allows the user to inspect and configure the current Sync port settings.

Clock Source	:	This is the instance number of the clock source. This has to be referenced when selecting 'Manual' Mode
Nominated	:	When a clock source is nominated, the clock output from the related $\underline{PHY}$ (Port) is enabled against the clock controller. This makes it available as a possible source in the clock selection process.
Port	:	The ports that are possible to select for this clock source, is presented.
LOCS	:	Signal is lost on this clock source

#### **Clock Selection Mode and Status**

Mode	:	The definition of the 'best' clock source is firstly the one with the highest $(QL)$ and secondly (the ones with equal QL) the highest priority.
		Clock Selector can be in different modes:
		<b>Manual:</b> Clock selector will select the clock source stated in Source (see below). If this manually selected clock source is failing, the clock selector will go into holdover state.
Source	:	The clock source locked to when clock selector is in locked state
Clock Source	:	The clock source locked to when clock selector is in locked state.
LOL	:	Clock selector has raised the Los Of Lock alarm.
Refresh	:	Click to refresh the page immediately
Save	:	Click to save changes
Reset	:	Click to undo any changes made locally and revert to previously saved values.

# Configuration > MAC Table (<u>Only applicable for Ether</u>)

	ク → 層 ♂ ×  Ø BroadOne_GX4000 ×	□ □ × ∩ ☆ ☺
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0- 2
<ul> <li>Summary</li> <li>Configuration <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation</li> <li>VLANs</li> </ul> </li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Configuration > MAC Table   Aging Configuration   Disable Automatic Aging   Aging Time   300   seconds   MAC Table Learning   Port Members   Maintenance Line Radio   Auto   Oisable   Oisable   Oisable   Oisable   Oisable   Oisable   Disable   Oisable   Oisa	
	Save Reset	

Configuration > MAC Table Main Frame

#### Aging Configuration:

By default, dynamic entries are removed from the MAC table after 300 seconds. This removal is also called aging. Configure aging time by entering a value here in seconds:

Aging Time : Setting range is 10 to 1000000.

Disable : Disable automatic aging of dynamic entries by checking. Default is not checking. Automatic Aging

#### **MAC Table Learning:**

If the learning mode for a given port is grayed out, another module is in control of the mode, so that it cannot be changed by the user. An example of such a module is the MAC-Based Authentication under 802.1X. Each port can do learning based upon the following settings:

Auto	:	Learning is done automatically as soon as a frame with unknown SMAC is received. (default)
Disable	:	No learning is done
Secure	:	Only static MAC entries are learned, all other frames are dropped. <b>Note:</b> Make sure that the link used for managing the switch is added to the Static Mac Table before changing to secure learning mode, otherwise the management link is lost and can only be restored by using another non-secure port or by connecting to the switch via the serial interface.

# Static MAC Table Configuration:

The static entries in the MAC table are shown in this table. The static MAC table can contain 64 entries. The MAC table is sorted first by <u>VLAN ID</u> and then by MAC address.

Delete	:	Check to delete the entry. It will be deleted during the next save.
VLAN ID	:	The VLAN ID of the entry.
MAC Address	:	The MAC address of the entry.
Port Member	:	Checkmarks indicate which ports are members of the entry. Check or uncheck as needed to modify the entry.
Adding a New Static Entry		Click to add a new entry to the static MAC table. Specify the VLAN ID, MAC address, and port members for the new entry. Click "Save".
Save	:	Click to save changes
Reset	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > VLAN Translation (Only applicable for Ether)

# Configuration > VLAN Translation > Port to Group Mapping

		÷ م	🗟 C 🗙 🍯 BroadOne_GX4000	×	□ <b>□ ×</b> ① ①
	Fuji	tsu BroadC [l	ne GX4000 Series - Nakahara001#:]	Ethernet	( <del>)</del> ?
<ul> <li>Summary</li> <li>Configuration         <ul> <li>Alarm</li> <li>Radio</li> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree</li> <li>SyncE</li> <li>MAC Table</li> <li>VLAN Translation             <ul> <li>Port to Group Mapping</li> <li>VID Translation</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul> </li> </ul></li></ul>	Configuration > Group ID Mainter 3 0 2 0 1 0 Add New Entry Save Reset	VLAN Translati	on > Port to Group Mappir	1 <b>g</b> Auto-refresh 🔲 🖳	afresh

Configuration > VLAN Translation > Port to Group Mapping Main Frame

#### Port to Group Mapping:

Group ID	:	A valid Group ID is an integer value from 1 to 29. A set of VLAN Translations are mapped to a group Id. This way a port is mapped to a list of VLAN Translations easily by mapping it to a group. Number of groups in this switch is equal to the number of ports (29) present in this switch. A port can be mapped to any of the groups. Multiple ports can also be mapped to a group with same group Id. <u>Note</u> : By default, each port is mapped to a group with a group Id equal to the port number. For example, port 1 is mapped to the group with ID=1.
Port Member	:	A row of radio buttons, one radio button for each port is displayed for each Group ID. To include a port in a Group, click the radio button. A port must belong to at least one group.
Adding a New Entry	:	Click <b>Add New Entry</b> to add a new entry in Port to Group Mapping Table. An empty row is added to the table with the Group ID and array of radio buttons, one radio button for each port (click corresponding radio button to make port to be member of a particular Group). Legal values for a VLAN ID are <b>1</b> through <b>4095</b> . The <b>Delete</b> button can be used to undo the addition of new entry.
Save	:	Click to save changes
Reset	:	Click to undo any changes made locally and revert to previously saved values
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds

# **Configuration > VLAN Translation > VID Translation Mapping**



Configuration > VLAN Translation > VID Translation Mapping Main Frame

<u>VID Translation Mapping</u>: This menu allows you to map VLAN ID to other VLAN ID for a particular Group ID Globally

Delete	:	To delete a VLAN Translation Group database entry, check this box. The entry will be deleted on the switch during the next Save
Group ID	:	A valid Group ID is an integer value from 1 to 29. A set of VLAN Translations are mapped to a group Id. This way a port is mapped to a list of VLAN Translations easily by mapping it to a group. Number of groups in a switch is equal to the number of ports present in this switch. A port can be mapped to any of the groups. Multiple ports can also be mapped to a group with same group Id. <u>Note</u> : By default, each port is mapped to a group with a group Id equal to the port number. For example, port 1 is mapped to the group with ID=1.
VLAN ID	:	Indicates the ID to which Group ID will be mapped. A valid VLAN ID ranges from 1-4095.
Translated to VID	:	Indicates the VID to which VLAN ID of ingress frames will be changed, if VID in incoming frames if same as configured in VLAN ID field preceded by this field on member ports of a particular group to which this entry belongs. Setting range is 1 to 4095 and default is null.
Adding a new VID Translation entry	:	Click <b>Add New Entry</b> to add a new entry in VLAN Translation table. An empty row is added to the table, the Group ID, VLAN ID and Translated to VID fields can be configured as needed. Legal values for a VLAN ID are <b>1</b> through <b>4095</b> . The <b>Delete</b> button can be used to undo the addition of new entry.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately
Save	:	Click to save changes
Rest	:	Click to undo any changes made locally and revert to previously saved values

# Configuration > VLANs (<u>Only applicable for Ether</u>)

# Configuration > VLANs > VLAN Membership

	Fuji	ନ - ଛ ୯ ×   @ Broa tsu BroadOne GX4000 [Nakahara00	<sup>dOne_GX4000</sup> × ) Series - Ethernet )1#:]	
Summary     Configuration     Alarm     Radio     System     Ports     Security     Spanning Tree     SyncE     MAC Table     VLAN Translation     VLANs	Configuration > VLA Start from VLAN 1 Delete VLAN ID 1 2 Add New VLAN	ANs > VLAN Membership with 20 entries per page. VLAN Name default 1abc5	Port Members Maintenance Line Radio	Refresh I<< >>
VEAN Membership     Ports     Monitor     Test&Diagnostics     Maintenance	Save Reset			

Configuration > VLANs > VLAN Membership Main Frame

#### VLANs Membership:

The <u>VLAN</u> membership configuration for the switch can be monitored and modified here. Up to 4096 VLANs are supported. This page allows for adding and deleting VLANs as well as adding and deleting port members of each VLAN.

#### Navigating the VLAN Table:

Each page shows up to 99 entries from the VLAN table, default being 20, selected through the "entries per page" input field. When first visited, the web page will show the first 20 entries from the beginning of the VLAN Table. The first displayed will be the one with the lowest VLAN ID found in the VLAN Table.

The "VLAN" input fields allow the user to select the starting point in the VLAN Table. Clicking the **Refresh** button will update the displayed table starting from that or the closest next VLAN Table match. The >> will use the last entry of the currently displayed VLAN entry as a basis for the next lookup. When the end is reached the text "No more entries" is shown in the displayed table. Use the **I<<** button to start over.

Delete	:	To delete a VLAN entry, check this box. The entry will be deleted during the next Save
VLAN ID	:	Indicates the ID of this particular VLAN
VLAN Name	:	Indicates the name of the VLAN. Maximum length of the VLAN Name String is 32 and default is null. VLAN Name can only contain alphabets or numbers. VLAN name should contain at least one alphabet. VLAN name can be edited for the existing VLAN entries or it can be added to the new entries. But maximum number of VLANs which can have Names is 64.
Port Members	:	A row of check boxes for each port is displayed for each VLAN ID. To include a port in a VLAN, check the box as ✓. To include a port in a forbidden port list, check the box as shown ×. To remove or exclude the port from the VLAN, make sure the box is unchecked as shown □. By default, no ports are members, and for every new VLAN entry all boxes are unchecked.

Adding a New VLAN	:	Click <b>Add New VLAN</b> to add a new VLAN ID. An empty row is added to the table, and the VLAN can be configured as needed. Legal values for a VLAN ID are <b>1</b> through <b>4095</b> .
		The VLAN is enabled when you click on "Save". The <b>Delete</b> button can be used to undo the addition of new VLANs.
Save	:	Click to save changes
Reset	:	Click to undo any changes made locally and revert to previously saved values
Refresh	:	Refreshes the displayed table starting from the "VLAN ID" input fields
l<<	:	Updates the table starting from the first entry in the VLAN Table, i.e. the entry with the lowest VLAN ID
>>	:	Updates the table, starting with the entry after the last entry currently displayed

### Configuration > VLANs > Port



Configuration > VLANs > Port Main Frame

Configuration > VLANs > Ports: This menu is used for configuring the switch port VLAN

**Ethertype for Custom S-port 0x...:** This field specifies the ether type used for Custom S-ports. This is a global setting for all the Custom S-ports

 Port
 : The port name in the same row.

 Port Type
 : Port can be one of the following types: Unaware, Customer port (C-port), Service port(S-port), Custom Service port(S-custom-port).

 If Port Type is Unaware, all frames are classified to the Port VLAN ID and tags are not removed. Default is Unaware.

Ingress Filtering	:	Enable ingress filtering on a port by checking the box. This parameter affects VLAN ingress processing. If ingress filtering is enabled and the ingress port is not a member of the classified VLAN of the frame, the frame is discarded. By default, ingress filtering is disabled (no checkmark). Default is no checkmark.
Frame Type	:	Determines whether the port accepts all frames or only tagged/untagged frames. This parameter affects VLAN ingress processing. If the port only accepts tagged frames, untagged frames received on the port are discarded. By default, the field is set to <b>All</b> . Default is All.
Port VLAN Mode	:	Configures the Port VLAN Mode. The allowed values are <b>None</b> or <b>Specific</b> . This parameter affects VLAN ingress and egress processing.
		If <b>None</b> is selected, a VLAN tag with the classified VLAN ID is inserted in frames transmitted on the port. This mode is normally used for ports connected to VLAN aware switches.
		If <b>Specific</b> (default value) is selected, a Port VLAN ID can be configured (see below). Untagged frames received on the port are classified to the Port VLAN ID. If VLAN awareness is disabled, all frames received on the port are classified to the Port VLAN ID. If the classified VLAN ID of a frame transmitted on the port is different from the Port VLAN ID, a VLAN tag with the classified VLAN ID is inserted in the frame.
Port VLAN ID	:	Configures the VLAN identifier for the port. The allowed values are <b>1</b> through <b>4095</b> . Default value is 1. <u>Note</u> : The port must be a member of the same VLAN as the Port VLAN ID.
Tx Tag	:	Determines egress tagging of a port. Untag_pvid - All VLANs except the configured PVID will be tagged. Tag_all - All VLANs are tagged. Untag_all - All VLANs are untagged. Default is Untag_pvid.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Save	:	Click to save changes
Rest	:	Click to undo any changes made locally and revert to previously saved values

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# **Monitor**

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#### Monitor > Alarm

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Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]					
Summary     Configuration     Monitor     Alarm     Studem	Monit	tor > Alarm			Auto-refresh 🔲 Refresh 2013-02-05T08:52:59+00:00
> Ports	No.	Level	Time	Category	Condition Description
Security     Security	1	😑 Warning	2013-02- 05T08:16:36+00:00	Hardware	Internal Power Source Failure
MAC Table	2	😑 Warning	2013-02- 05T08:16:05+00:00	Radio	RS Synchronization Loss
<ul> <li>VLANs</li> <li>Radio Performance</li> </ul>	3	💛 Warning	2013-02- 05T08:15:56+00:00	Line	MOD_NR(Module Not Ready (mirroring hardware output pin))
<ul> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	4	😑 Warning	2013-02- 05T08:15:56+00:00	Line	RX_CDR Unlocked(Unlocked:Loss of Lock of RX side CDR)
	5	lnfo	2013-02- 05T08:15:56+00:00	Line	RX_LOS(RX Loss of Signal (mirroring hardware output pin))
	6	😑 Warning	2013-02- 05T08:15:56+00:00	Line	RX_NR(Any condition leading to invalid data on the RX path)
	7	Error	2013-02- 05T08:15:55+00:00	Hardware	IO Error
	8	e Error	2013-02- 05T08:15:55+00:00	Hardware	Startup Failure
	9	lnfo	2013-02- 05T08:15:55+00:00	Line	Optical Power Received Out of Range
	10	lnfo	2013-02- 05T08:15:55+00:00	Line	Optical Power Received Degrade

Monitor > Alarm Menu Frame

Monitor > Alarm:		
No.	:	The line number of the table.
Level	:	The level of the severity of the alarm. <b>Error</b> (indicated with red icon): High level problem. Equipment can not work correctly, under this condition. Fatal problem happens on internal device or process. <b>Warning</b> (indicated with yellow icon): Low level problem. Equipment is working. However some problem happens on interface of Radio, Line Clock or Console, otherwise hardware has degradation. <b>Info</b> (indicated with blue icon): Information except Error and Warning to be informed to the operator.
Time	:	The occurrence time of the alarm.
Category	:	The category of alarms. The displayed categories are: Hardware: Related to the hardware. Radio: Related to the Radio interface. Line: Related to the Line interface. Clock: Related to the Line interface. Console: Related to the Console interface.
Condition Description	:	Indicates the description of the alarm.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh Button	:	Click to refresh the page

# Monitor > System

# Monitor > System > Information

(<) (a) (a) http://192.168	.0.10/	ည - 🗟 ငံ X 💋 Bro	adOne_GX4000	×	6 2 3
	Fujitsı	u BroadOne GX400 [Nakahara0	0 Series - E 001#:]	thernet	0 ?
Summary     Configuration	Monitor > System > In	formation		Auto-refresh	Refresh
- Alarm	Sy	stem			
- Aldini	Contact	Nakahara:	1		
- Information	Name	Nakahara001-2F			
= Log	Location	Nakahara001#:			
► Ports	Site Code	a1-2:			
Security	Equipment Code	b-2:			
Spanning Tree	Local No.	c1-2:			
- MAC Table	Resource State	d1-2:			
	Equipment Note	e1-2:			
Dadio Derformanco	Har	dware			
Test Diagnostics	MAC Address	5c-9a-d8-36-af-1b			
Maintenance	System Name	BroadOne GX4480			
Maintenance	System No	TA04010-B936			
	System Version	020AA			
	The date of manufacture	20120401			
	Serial Number	00000012345			
	CPLD Version	V00L03			
		lime			
	System Date	2013-02-05T08:59:10+00:00	1		
	System Uptime	0d 00:43:20			
	Sot	ftware			
	ACT Version	V01L01C06-01a			
	STBY Version	V01L51C06-01a			
	F	PGA	5.		
	ACT Version	V00L05C00	- 2		
	STBY Version	V00L05C00			
	Land contract the second block		•S		

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Monitor > System > Information Menu Frame

## Monitor > System > Information:

Contact	:	The system contact configured in Configuration   System   Information   System Contact.
Name	:	The system name configured in Configuration   System   Information   System Name.
Location	:	The system location configured in Configuration   System   Information   System Location
Site Code	:	The site code configured in Configuration   System   Information   Site Code.
Equipment Code	:	The equipment code configured in Configuration   System   Information   Equipment Code.
Local No.	:	The local number configured in Configuration   System   Information   Local No.
Resource State	:	The local number configured in Configuration   System   Information   Resource State.
Equipment Note	:	The equipment note configured in Configuration   System   Information   Equipment Note.
MAC Address	:	The MAC Address of this switch.
System Name	:	It is a name of the system.
System No.	:	It is a chart number of the system.

System Version	:	It is a version of the system.
Date of Manufacture	:	It is date of manufacture
Serial Number	:	It is a serial number of manufacturing
CPLD Version	:	It is a version of CPLD.
System Date	:	The current (GMT) system time and date. The system time is obtained through the Timing server running on the switch, if any.
System Uptime	:	The period of time the device has been operational.
Software ACT Version	:	It is a version of Software on the ACT side.
Software STBY Version	:	It is a version of Software on the STBY side.
FPGA ACT Version	:	It is a version of FPGA on the ACT side.
FPGA STBY Version	:	It is a version of FPGA on the STBY side.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh Button	:	Click to refresh the page

# Monitor > System > Log

A http://192.168	.0.10/		Q <del>.</del>	思 ct X (名 Bro	DadOne GX4000	<b>-</b>
		F	ujitsu BroadC [	Dne GX400 Nakahara0	00 Series - Ethernet 001#:]	
Summary     Configuration     Monitor     Alarm     System     Information     Log     Ports     Security	Monit Level Categ	All All al number of	em > Log	Auto-refresh	Refresh Clear I<< >> >>I	*
<ul> <li>Spanning Tree</li> <li>MAC Table</li> </ul>			Time	Category	e. Message	
<ul> <li>VLANs</li> <li>Radio Performance</li> </ul>	1	Info	2013-02- 05T08:15:51:00:00	Software	Switch just made a cold boot.	_
<ul> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	2	Info	2013-02- 05T08:15:53+00:00	Software	Link up on Line	=
	3	Info	2013-02- 05T08:15:53+00:00	Software	Link up on Radio	
	4	Info	2013-02- 05T08:15:55+00:00	Line	ALM Occured, Code:0xB300, Optical Power Received	
	5	Info	2013-02- 05T08:15:55±00:00	Line	ALM Occured, Code:0xB301, Optical Power Received	
	6	Error	2013-02- 05T08:15:55+00:00	Hardware	ALM Occured, Code:0x2208, Startup Failure,	
	7	Error	2013-02- 05T08:15:55+00:00	Hardware	ALM Occured, Code:0x2209, Startup Failure,	
	8	Error	2013-02- 05T08:15:55+00:00	Hardware	ALM Occured, Code:0xE000, Startup Failure,	
	9 🧲	Error	2013-02- 05T08:15:55+00:00	Hardware	ALM Occured, Code:0xBC03, IO Error	
	10	Warning	2013-02- 05T08:15:56+00:00	Line	ALM Occured, Code:0x8004, XFP RX_NR(Any condition leading to invalid data on the RX path). Line	
	11	Info	2013-02- 05T08:15:56+00:00	Line	ALM Occured, Code:0x8005, XFP RX_LOS(RX Loss of Signal(mirroring bardware output pin)) Line	
	12 🤇	Warning	2013-02- 05T08:15:56+00:00	Line	ALM Occured, Code:0x8006, XFP RX_CDR Unlocked (Unlocked) oss of Lock of RX side CDR) Line	
	13	Warning	2013-02- 05T08:15:56+00:00	Line	ALM Occured, Code:0x8007, XFP MOD_NR(Module Not Ready(mirroring hardware output pin)), Line	Ŧ

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Monitor > System > Log Menu Frame

## <u>Monitor > System > Log</u>:

ID	:	The ID (>= 1) of the system log entry.
Level	:	The level of the system log entry. The following level types are supported: Info: Information level of the system log. Warning: Warning level of the system log. Error: Error level of the system log. All: All levels.
Time	:	The time of the system log entry.
Category	:	The category of the system log. The following kind of categories are supported: Software Hardware Radio Line Clock Console All
Message	:	The message of the system log entry

Auto-refresh	:	Check the box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh	:	Update the system log entries, starting from the current entry ID.
Clear	:	Flushes the selected log entries.
l<<	:	Update the system log entries, starting from the first available entry ID.
<<	:	Update the system log entries, starting from the last entry currently displayed.
>>	:	Updates the system log entries, starting from the last entry currently displayed.
>>l	:	Updates the system log entries, starting from the last available entry ID

## Monitor > Port (Only applicable for Ether)

# Monitor > Port > Traffic Overview

			Fujits	u Broad	One GX40 [Nakahara	00 Serie 001#:]	s - Ethern	et		0
ummary onfiguration fonitor	Monitor > P	orts > Traff	ic Overview					Auto-re	efresh 🗖 🗌 Refr	esh Clea
Alamin	Port	Pa	Ckets	Beenhund	Vies	E	Transpland	Desciund	Transmitted	Filtered
Ports • Traffic Overview • Detailed Statistice Security Spanning Tree MAC Table VI.ANs Radio Performance estADiagnostics laintenance	Badio Line Meintenance	0 0 1165	136 28 602	0 0 292273	46146 9321 115346	0 0 0	0 0 0	0 0 137	0000	0 0 1164

Monitor > Port > Traffic Overview Menu Frame

<u>Monitor > Ports > Traffic Overview</u>: This menu provides an overview of general traffic statistics for all switch ports

Port	:	The port for the settings contained in the same row.
Packets	:	The number of received and transmitted packets per port.
Bytes	:	The number of received and transmitted bytes per port.
Errors	:	The number of frames received in error and the number of incomplete transmissions per port.
Drops	:	The number of frames discarded due to ingress or egress congestion.
Filtered	:	The number of received frames filtered by the forwarding process.
Refresh	:	Click to refresh the page immediately
Clear	:	Clears the counters for all ports
Auto-refresh	:	Check this box to enable an automatic refresh of the page at regular intervals

# Monitor > Port > Detailed Statistics Ratio

- 100 C Hutpl//192.16	p+1	IU A	Brobbune_Gx4000 ×	4		10.77								
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]													
Summary     Configuration	Monitor > Ports > Detailed statistics Radio		Radio	• Auto-refresh	Refresh	Clear								
Monitor	Receive Total		Transmit	Total										
Suctom	Rx Packets	0	Tx Packets		136									
- Dods	Rx Octets	0	Tx Octets		46146									
- Traffic Overnmer	Rx Unicast	0	Tx Unicast		0									
Detailed Statistics	Rx Multicast	0	Tx Multicast		100									
Security	Rx Broadcast	0	Tx Broadcast		36									
<ul> <li>Spanning Tree</li> </ul>	Rx Pause	- 9	Tx Pause		- 8									
MAC Table	Receive Size Counters		Transmit Size Counters											
▶ VLANS	Rx 64 Bytes	0	Tx 64 Bytes		11									
<ul> <li>Radio Performance</li> </ul>	Hx b5-12/ Bytes	0	1x 65-127 Bytes		38									
Test&Diagnostics	RX 120-200 Bytes		Tx 120-200 bytes		11									
Maintenance	Dx 512 1022 Butes	0	Tx 512 1023 Butes		45									
	= Rx 1024 1526 Butes		Tx 1024 1526 Butes		- 0									
	Rx 1527. Bytes		Tx 1527. Bytes											
	Receive Error Counters		Transmit Error Counters											
	Rx Drops	0	Tx Drops		0									
	Rx CRC/Alignment	0	Tx Late/Exc. Coll.		0									
	Rx Undersize	0			200									
	Rx Oversize	0			1									
	Rx Fragments	0												
	Rx Jabber	0			-									
	Rx Filtered	0			-									

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Monitor > Port > Detailed Statistics Ratio Menu Frame

### Rx and Tx Total:

This menu provides detailed traffic statistics for a specific switch port. Use the port select box to select which switch port details to display. The displayed counters are the totals for receive and transmit, the size counters for receive and transmit, and the error counters for receive and transmit.

Rx and Tx Packets	:	The number of received and transmitted (good and bad) packets.
RX and Tx Octets	:	The number of received and transmitted (good and bad) bytes. Includes FCS, but excludes framing bits.
Rx and Tx Unicast	:	The number of received and transmitted (good and bad) unicast packets.
Rx and Tx Multicast	:	The number of received and transmitted (good and bad) multicast packets.
Rx and Tx Broadcast	:	The number of received and transmitted (good and bad) broadcast packets.
Rx and Tx Pause	:	A count of the MAC Control frames received or transmitted on this port that have an opcode indicating a PAUSE operation.

#### **Rx Error Counters:**

The number of received and transmitted (good and bad) packets split into categories based on their respective frame sizes.

Rx Drops	:	The number of frames are dropped due to lack of receive buffers or egress congestion.
RX CRC/Alignment	:	The number of frames received with CRC or alignment errors
RX Undersize	:	The number of short <sup>1</sup> frames received with valid CRC.
Rx Oversize	:	The number of long <sup>2</sup> frames received with valid CRC.

#### Rx Error Counters: (Cont'd)

The number of received and transmitted (good and bad) packets split into categories based on their respective frame sizes.

Rx Fragment	:	The number of short <sup>1</sup> frame received with invalid CRC.
Rx Jabber	:	The number of long <sup>2</sup> frames received with invalid CRC
Rx Filtered	:	The number of received frames filtered by the forwarding process.
		<sup>1</sup> Short frames are frames that are smaller than 64 bytes.
		<sup>2</sup> Long frames are frames that are longer than the configured maximum frame length for this port.
Tx Error Counter:	-	
Tx Drops	:	The number of frames dropped due to output buffer congestion.
Tx Late/Exc. Coll.	:	The number of frames dropped due to excessive or late collisions

# Monitor > Security (Only applicable for Ether)

## Monitor > Security > Access Management Statistics

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Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]												
<ul> <li>Summary</li> <li>Configuration</li> </ul>	Monitor >	Security > Access	Management Stat	tistics	Auto-refresh 🔲 Ref	fresh Clear						
Monitor	Interface	Received Packets	Allowed Packets	Discarded Packet	ts							
- Alarm	HTTP	0	0	Distantiated Facility	0							
▶ System	HTTPS	0	0		0							
▶ Ports	SNMP	0 0	Ő		0							
- Security	TELNET	Ō	Ō		0							
<ul> <li>Access Management</li> </ul>	SSH	0	0		0							
Switch	Latitude.	27.5	-									
Spanning Tree												
MAC Table												
VI ANS												
Radio Performance												
► Test&Diagnostics												
Maintenance												
l												

Monitor > Security > Access Management Statistics Menu Frame

Interface	:	The interface type through which the remote host can access the switch.
Received Packets	:	Number of received packets from the interface when access management mode is enabled.
Allowed Packets	:	Number of allowed packets from the interface when access management mode is enabled.
Discarded Packets	:	Number of discarded packets from the interface when access management mode is enabled.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately
Clear	:	Clear all statistics

# Monitor > Security > Switch > RMON > Statistics

					Fu	ijitsu E	Broad	One G [Nakai	X4000 hara00	Serie 1#:]	os - E	thern	et					(	3-6						
mmary enfiguration	Mo	nitor > Secu	rity > S	witch > i	RMON	> Statist	lics							Auto-refresh 🖾 Refresh											
Monitor     Alarm     System	ю	Port	Drop	Octets	Pkts	Broad- cast	Multi- cast	CRC Errors	Under- size	Over- size	Frag.	Jabb.	Coll.	64 Bytes	65 - 127	128	256	512	1024						
Security • Access Manogenant Subsition • Subsition • Simplifier • RMON • Simplifier Spanning Tree MAC Table	E	Radio L Line Maintenance	0 0 74	30133 252 188690	93 3 603	15 0 116	78 3 148	0	0	0	0	0	0	14 1 34	25 2 256	4 0 72	20 0 144	30 0 56	4						

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Monitor > Security > Switch > RMON > Statistics Menu Frame

This menu provides an overview of RMON Statistics entries. Each page shows up to 99 entries from the Statistics table, default being 20, selected through the "entries per page" input field. When first visited, the web page will show the first 20 entries from the beginning of the Statistics table. The first displayed will be the one with the lowest ID found in the Statistics table.

The "Start from Control Index" allows the user to select the starting point in the Statistics table. Clicking the **Refresh** button will update the displayed table starting from that or the next closest Statistics table match. The >> will use the last entry of the currently displayed entry as a basis for the next lookup. When the end is reached the text "No more entries" is shown in the displayed table. Use the I<< button to start over

ID	:	Indicates the index of Statistics entry.
Port	:	The port ID which wants to be monitored.
Drop	:	The total number of events in which packets were dropped by the probe due to lack of resources.
Octets	:	The total number of octets of data (including those in bad packets) received on the network.
Pkts	:	The total number of packets (including bad packets, broadcast packets, and multicast packets) received.
Broad-cast	:	The total number of good packets received that were directed to the broadcast address.
Multi-cast	:	The total number of good packets received that were directed to a multicast address.
CRC Errors	:	The total number of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets.
Under-size	:	The total number of packets received that were less than 64 octets.
Over-size	:	The total number of packets received that were longer than 1518 octets.
Frag.	:	The number of frames which size is less than 64 octets received with invalid CRC
Jabb.	:	The number of frames which size is larger than 64 octets received with invalid CRC
Coll.	:	The best estimate of the total number of collisions on this Ethernet segment.

64	:	The total number of packets (including bad packets) received that were 64 octets in length
65-127	:	The total number of packets (including bad packets) received that were between 65 to 127 octets in length.
128-255	:	The total number of packets (including bad packets) received that were from 128 to 255 octets in length.
256-512	:	The total number of packets (including bad packets) received that were from 256 to 511 octets in length.
513-1023	:	The total number of packets (including bad packets) received that were from 512 to 1023 octets in length
1024-1588	:	The total number of packets (including bad packets) received that were from 1024 to 1588 octets in length.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately
l<<	:	Updates the table starting from the first entry in the Statistics table, i.e. the entry with the lowest ID
>>	:	Updates the table, starting with the entry after the last entry currently displayed

# Monitor > Security > Switch > RMON > History

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				Fujits	su Bro	adO [N	ne GX4 akaha	000 s a001	Series #:]	- Ethe	rnet				0
ummary onfiguration onitor Alarm	Monitor Start from	Monitor > Security > Switch > RMON > History       Auto-refresh I Refresh I         Start from Control Index 0 and Sample Index 0 with 20 entries per page.													
Ports Security	History	Sample Index	Sample Start	Drop	Octets	Pkts	Broad- cast	Multi- cast	CRC Errors	Under- size	Over- size	Frag.	Jabb.	Coll.	Utilization
Access Management	1	1	9964	0	0	0	0	0	0	Ű	0	0	0	0	) A
Statistics Beeting	1	2	1901	0	9	0	0	0	0	0	0	0	0	0	
- FIMON	1	3	3701	0	0	0	0	0	0	0	0	0	0	0	
<ul> <li>Statistics</li> </ul>	1	4	7301	0	0	0	0	0	0		0	0	0	0	
<ul> <li>History</li> </ul>	1	6	9101	0	ů.	ő	0	0	0	ů	0	ő	0	0	
spanning Tree	1	7	10901	0	0	0	0	0	0	0	0	Ū.	0	0	
MAC Table	2		9954	0	0	0	0	0	0	0	0	0	0	0	
A ANS	2	2	1901	0	0	0	0	0	0	0	0	0	0	0	
cadio Performance	2	3	3701	0	0	0	0	0	0	0	0	0	0	0	(
stablagnostics	2	4	5501	0	0	0	0	0	0	0	0	0	0	0	5
Intenance	2	5	7301	0	0.	0	0	0	0.	0	0.	0	0	0	
	2	6	9101	0	0	0	0	0	0	0	0	0	0	0	
	2	1	10901	0	0	- 0	0	0	0	0	0	- 0	0	0	
	1	1	9964	0	290638	1060	278	244	. 0	0	0	2	0	0	
	1	2	1901	-0	41911	124	5	60	0	0	0	0	0	0	
	3	3	3701	0	99038	265	35	230	0	0	0	0	0	0	
	4	4	5501	0	32583	65		60	0	0	0	0	0	0	24
	2	0	7301	0	32330	04	4	00	0	0	0	0	0	0	- 3
	2		9101	- 9	32553	65		50	6	0	6	- 0	. 0	- 9	1

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Monitor > Security > Switch > RMON > History Menu Frame

This menu provides an overview of RMON History entries. Each page shows up to 99 entries from the Statistics table, default being 20, selected through the "entries per page" input field. When first visited, the web page will show the first 20 entries from the beginning of the Statistics table. The first displayed will be the one with the lowest ID found in the Statistics table.

The "Start from Control Index" allows the user to select the starting point in the Statistics table. Clicking the **Refresh** button will update the displayed table starting from that or the next closest Statistics table match. The >> will use the last entry of the currently displayed entry as a basis for the next lookup. When the end is reached the text "No more entries" is shown in the displayed table. Use the I<< button to start over

History Index	:	Indicates the index of History control entry.
Sample Index	:	Indicates the index of the data entry associated with the control entry
Sample Start	:	The total number of events in which packets were dropped by the probe due to lack of resources.
Drop	:	The total number of events in which packets were dropped by the probe due to lack of resources
Octets	:	The total number of octets of data (including those in bad packets) received on the network.
Pkts	:	The total number of packets (including bad packets, broadcast packets, and multicast packets) received.
Broadcast	:	e total number of good packets received that were directed to the broadcast address
Multicast	:	The total number of good packets received that were directed to a multicast address
CRCError	:	The total number of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets
Undersize	:	The total number of packets received that were less than 64 octets.

Oversize	:	The total number of packets received that were longer than 1518 octets.
Frag.	:	The number of frames which size is less than 64 octets received with invalid CRC.
Jabb.	:	The number of frames which size is larger than 64 octets received with invalid CRC.
Coll.	:	The best estimate of the total number of collisions on this Ethernet segment.
Utilization	:	The best estimate of the mean physical layer network utilization on this interface during this sampling interval, in hundredths of a percent.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately
<<	:	Updates the table starting from the first entry in the History table, i.e., the entry with the lowest History Index and Sample Index
>>	:	Updates the table, starting with the entry after the last entry currently displayed

# Monitor > Spanning Tree (<u>Only applicable for Ether</u>)

# Monitor > Spanning Tree > Bridge Status

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	Fujitsu Broa	dOne GX4000 Sei [Nakahara001#:]	ries - Ethernet	( <del>]</del> ?
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> </ul>	Monitor > Spanning Tr	ree > Bridge Status	Auto-refres	h 🗏 Refresh
<ul> <li>Alarm</li> <li>System</li> <li>Ports</li> <li>Security</li> <li>Access Management Statistics</li> <li>Switch</li> <li>RMON</li> <li>Statistics</li> <li>History</li> <li>Spanning Tree</li> <li>Bridge Status</li> <li>Port Status</li> <li>Port Status</li> <li>Port Status</li> <li>Port Status</li> <li>Port Status</li> </ul>	STP Brid Bridge Instance Bridge ID Root ID Root Cost Root Port Regional Root Internal Root Cost Topology Flag Topology Change Count Topology Change Last CIST Ports & Aggregatio	ge Status CIST 80:00-5C:9A:D8:36:AF:1B 80:00-5C:9A:D8:36:AF:1B 0 80:00-5C:9A:D8:36:AF:1B 0 Steady 0 		
<ul> <li>VLANs</li> <li>Radio Performance</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	No ports or aggregations a	State   Path Cost   Edge	Point2Point   Uptime	e

Monitor > Spanning Tree > Bridge Status Menu Frame

This menu provides detailed information on a single <u>STP</u> bridge instance, along with port state for all active ports associated.
# STP Bridge Status:

Bridge Instance	:	The Bridge instance - CIST, MST1,
Bridge ID	:	The Bridge ID of this Bridge instance.
Rout ID	:	The Bridge ID of the currently elected root bridge
Root Cost	:	The switch port currently assigned the root port role.
Root Port	:	Root Path Cost. For the Root Bridge this is zero. For all other Bridges, it is the sum of the Port Path Costs on the least cost path to the Root Bridge.
Regional Root	:	The Bridge ID of the currently elected regional root bridge, inside the MSTP region of this bridge. (For the CIST instance only). MSTP:not available.
Internal Root Cost	:	The Regional Root Path Cost. For the Regional Root Bridge this is zero. For all other CIST instances in the same MSTP region, it is the sum of the Internal Port Path Costs on the least cost path to the Internal Root Bridge. ( <i>For the CIST instance only</i> ). MSTP:not available.
Topology Flag	:	The current state of the Topology Change Flag of this Bridge instance.
Topology Change Count	:	The number of times where the topology change flag has been set (during a one-second interval).
Topology Change Last	:	The time passed since the Topology Flag was last set.

# **CIST Port & Aggregation State**

Port	:	The switch port number of the logical STP port.
Port ID	:	The port id as used by the STP protocol. This is the priority part and the logical port index of the bridge port
Role	:	The current STP port role. The port role can be one of the following values: Alternate Port, Backup Port, Root Port and Designated Port.
State	:	The current STP port state. The port state can be one of the following values: <b>Discarding, Learning, Forwarding</b> .
Path Cost	:	The current STP port path cost. This will either be a value computed from the <b>Auto</b> setting, or any explicitly configured value.
Edge	:	The current STP port (operational) Edge Flag. An Edge Port is a switch port to which no Bridges are attached. The flag may be automatically computed or explicitly configured. Each Edge Port transits directly to the Forwarding Port State, since there is no possibility of it participating in a loop.
Point-to-Point	:	The current STP port point-to-point flag. A point-to-point port connects to a non-shared LAN media. The flag may be automatically computed or explicitly configured. The point-to-point properties of a port affect how fast it can transit to STP state.
Uptime	:	The time since the bridge port was last initialized
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately

# Monitor > Spanning Tree > Port Status

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	Fujitsı	ו BroadC [	One GX40 Nakahara	00 Series 001#:]	- Ethernet	6
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor <ul> <li>Alarm</li> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree</li> <li>Bridge Status</li> <li>Port Statustics</li> <li>MAC Table</li> <li>VLANs</li> <li>Radio Performance</li> </ul> </li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Monitor > S Port Radio Line Maintenance	CIST Role Non-STP Non-STP Non-STP	ee > Port State Forwarding Forwarding Forwarding	tus Uptime - -	Auto-refresh	Refresh

Monitor > Spanning Tree > Port Status Menu Frame

This menu displays the <u>STP</u> CIST port status for physical ports of the switch.

Port	:	The switch port name of the logical STP port
CIST Role	:	The current STP port role of the CIST port. The port role can be one of the following values: Alternate Port, Backup Port, Root Port, Designated Port and Disabled.
CIST State	:	The current STP port state of the CIST port. The port state can be one of the following values: <b>Discarding, Learning</b> and <b>Forwarding</b> .
Uptime	:	The time since the bridge port was last initialized.
Auto-refresh		Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh		Click to refresh the page immediately

# Monitor > Spanning Tree > Port Statistics

	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]
Summary     Configuration     Monitor     Alarm	Monitor > Spanning Tree > Port Statistics     Auto-refresh     Refresh     Clear       Port     Transmitted     Received     Discarded       MSTP     RSTP     STP     TCN     MSTP     RSTP     TCN     Ullegal
<ul> <li>System</li> <li>Ports</li> <li>Security</li> <li>Spanning Tree <ul> <li>Bridge Status</li> <li>Port Status</li> <li>Port Statistics</li> <li>MAC Table</li> <li>VLANs</li> <li>Radio Performance</li> </ul> </li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	No ports enabled

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Monitor > Spanning Tree > Port Statistics Menu Frame

This menu displays the STP port statistics counters of bridge ports in the switch

Port	:	The switch port number of the logical STP port.
MSTP	:	The number of MSTP Configuration BPDU's received/transmitted on the port MSTP:not available.
RSTP	:	The number of RSTP Configuration BPDU's received/transmitted on the port
STP	:	The number of legacy STP Configuration BPDU's received/transmitted on the port.
TCN	:	The number of (legacy) Topology Change Notification BPDU's received/transmitted on the port.
Discarded Unknown	:	The number of unknown Spanning Tree BPDU's received (and discarded) on the port.
Discarded Illegal	:	The number of illegal Spanning Tree BPDU's received (and discarded) on the port.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately
Clear	:	Click to reset the counters

# Monitor > MAC Table (<u>Only applicable for Ether</u>)

	F	ujitsu	ନ- ≊୯× I BroadOne G [Nakah	<mark> </mark>	4000 ∋s - Eth	×	- □ × 0 û ☆ 0 [+ ?
Summary     Configuration     Monitor     Alarm     System	Monitor Start from	> MAC	Table and MAC addre	Auto-refresh	Refres	h 20	• K< >> entries per page.
<ul> <li>Ports</li> <li>Security</li> </ul>	Tune	VIAN	MAC Address	CPUL Maintenance	bers	-	
<ul> <li>Spanning Tree</li> </ul>	Dynamic	1	4C-E6-76-55-37-EA		Line		
MAC Table	Static	1	5C-9A-D8-36-AF-1B	1			
<ul> <li>Radio Performance</li> </ul>	Static	1	FF-FF-FF-FF-FF	1 1	< <		
<ul> <li>▶ Test&amp;Diagnostics</li> <li>▶ Maintenance</li> </ul>							

Monitor > MAC Table Menu Frame

Entries in the <u>MAC Table</u> are shown on this page. The MAC Table contains up to 8192 entries, and is sorted first by <u>VLAN ID</u>, then by MAC address

#### Navigating the MAC Table

Each page shows up to 999 entries from the MAC table, default being 20, selected through the "entries per page" input field. When first visited, the web page will show the first 20 entries from the beginning of the MAC Table. The first displayed will be the one with the lowest VLAN ID and the lowest MAC address found in the MAC Table.

The "Start from MAC address" and "VLAN" input fields allow the user to select the starting point in the MAC Table. Clicking the **Refresh** button will update the displayed table starting from that or the closest next MAC Table match. In addition, the two input fields will - upon a **Refresh** button click - assume the value of the first displayed entry, allowing for continuous refresh with the same start address. The >> will use the last entry of the currently displayed VLAN/MAC address pairs as a basis for the next lookup. When the end is reached the text "No more entries" is shown in the displayed table. Use the **I<<** button to start over.

Switch (stack only)	:	The switch port number of the logical STP port.
Туре	:	The stack unit where the entry is learned
VLAN	:	The VLAN ID of the entry.
MAC Address	:	The MAC address of the entry
Port Member	:	The ports that are members of the entry
Auto-refresh	:	Automatic refresh occurs every 3 seconds
Refresh	:	Refreshes the displayed table starting from the "Start from MAC address" and "VLAN" input fields
Clear	:	Flushes all dynamic entries
l<<	:	Updates the table starting from the first entry in the MAC Table, i.e. the entry with the lowest VLAN ID and MAC address
>>	:	Updates the table, starting with the entry after the last entry currently displayed.

# Monitor > VLANs (Only applicable for Ether)

# Monitor > VLANs > VLAN Membership

	- 回 ×
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]
Summary     Configuration     Monitor     Alarm     System     Ports     Security     Spanning Tree     MAC Table     VLANs     VLAN Membership     VLAN Port     Radio Performance     Test&Diagnostics     Maintenance	Monitor > VLANs > VLAN Membership       Combined        Auto-refresh       Refresh         Start from VLAN 1       with 20       entries per page.       >>         Port Members       VLAN ID       Maintenance Line Radio       1       V       2         2       V       -       -       -       -

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Monitor > VLANs > VLAN Membership Menu Frame

This menu provides an overview of membership status of VLAN users.

VLAN User	:	VLAN User module uses services of the VLAN management functionality to configure VLAN memberships and VLAN port configurations such as PVID and UVID. Currently we support the following VLAN user types:
		Web/SNMP: These are referred to as static.
		MSTP : The 802.1s Multiple Spanning Tree protocol (MSTP) uses VLANs to create multiple spanning trees in a network, which significantly improves network resource utilization while maintaining a loop-free environment. MSTP:not available.
Port Membership	:	A row of check boxes for each port is displayed for each VLAN ID. If a port is included in a VLAN, an image ✓ will be displayed. If a port is included in a Forbidden port list, an image ≤ will be displayed. If a port is included in a Forbidden port list and dynamic VLAN user register VLAN on same Forbidden port, then conflict port will be displayed as ≥.
VLAN Membership	:	The VLAN Membership Status Page shall show the current VLAN port members for all VLANs configured by a selected VLAN User (selection shall be allowed by a Combo Box). When ALL VLAN Users are selected, it shall show this information for all the VLAN Users, and this is by default. VLAN membership allows the frames classified to the VLAN ID to be forwarded on the respective VLAN member ports.
Button	:	Select VLAN Users from <b>Static</b> , <b>MSTP</b> and <b>Combined</b> . MSTP:not available.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately

#### Navigating the VLAN Monitor page

Each page shows up to 99 entries from the VLAN table, default being 20, selected through the "entries per page" input field. When first visited, the web page will show the first 20 entries from the beginning of the VLAN Table. The first displayed will be the one with the lowest VLAN ID found in the VLAN Table.

The "VLAN" input fields allow the user to select the starting point in the VLAN Table. Clicking the **Refresh** button will update the displayed table starting from that or the closest next VLAN Table match. The >> will use the last entry of the currently displayed VLAN entry as a basis for the next lookup. When the end is reached the text "No more entries" is shown in the displayed table. Use the **I**<< button to start over.

#### Monitor > VLANs > VLAN Port

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<ul> <li>Summary</li> <li>Configuration</li> </ul>	Monitor > V	LANs >	VLAN Port		Static	<ul> <li>Auto-refree</li> </ul>	esh 🗖 🛛	Refresh
Monitor     Alarm     System	Port	PVID	Port Type	Ingress Filtering	Frame Type	Tx Tag	UVID	Conflicts
Ports	Radio	1	UnAware	Disabled	All	Untag_this	1	No
<ul> <li>Security</li> <li>Spanning Tree</li> <li>MAC Table</li> <li>VLANS <ul> <li>VLAN Membership</li> <li>VLAN Port</li> </ul> </li> <li>Radio Performance</li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	Line Maintenance	1	UnAware UnAware	Disabled Disabled	All All	Untag_this Untag_this	1	No No

Monitor > VLANs > VLAN Port Menu Frame

VLAN User	:	VLAN User module uses services of the VLAN management functionality to configure VLAN memberships and VLAN port configurations such as PVID and UVID. Currently we support the following VLAN user types: Web/SNMP : These are referred to as static.
		MSTP: The 802.1s Multiple Spanning Tree protocol (MSTP) uses VLANs to create multiple spanning trees in a network, which significantly improves network resource utilization while maintaining a loop-free environment. MSTP:not available.
Port	:	The port name in the same row.
PVID	:	Shows the VLAN identifier for that port. The allowed values are 1 through 4095. The default value is 1.
Port Type	:	Shows the Port Type. Port type can be any of Unaware, C-port, S-port, Custom S-port. If Port Type is Unaware, all frames are classified to the Port VLAN ID and tags are not removed. C-port is Customer Port. S-port is Service port. Custom S-port is S-port with Custom TPID.
Ingress Filtering	:	Shows the ingress filtering on a port. This parameter affects VLAN ingress processing. If ingress filtering is enabled and the ingress port is not a member of the classified VLAN, the frame is discarded.

Frame Type	:	Shows whether the port accepts all frames or only tagged frames. This parameter affects VLAN ingress processing. If the port only accepts tagged frames, untagged frames received on that port are discarded.
Tx Tag	:	Shows egress filtering frame status whether tagged or untagged.
UVID	:	Shows UVID (untagged VLAN ID). Port's UVID determines the packet's behaviour at the egress side
Conflicts	:	Shows status of Conflicts whether exists or not. When a Volatile VLAN User requests to set VLAN membership or VLAN port configuration, the following conflicts can occur:
		Functional Conflicts between features. Conflicts due to hardware limitation. Direct conflict between user modules.
Button	:	Select VLAN Users from Static, MSTP and Combined.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds
Refresh	:	Click to refresh the page immediately

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# Monitor > Radio Performance

# Monitor > Radio Performance > Current



Monitor > Radio Parameter > Current Menu Frame

#### Radio Performance > Current:

Time	:	The time that measured performance data.
Tx Level (dBm)	:	The signal level of radio transmitting.
Rx Level (dBm)	:	The signal level of radio receiving.
Radio Link		Display radio link quality
Quality		Green: Radio link quality high Yellow: Radio link quality middle Red: Radio link quality low Grey: Radio link quality is Loss of Frame
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh	:	Click to refresh the page

# Monitor > Radio Performance > 15 Minutes

				Fuji	tsu Br	roadOr	ne GX4000 Ether70G-	Series - Eth 3]	ernet		0-6
• Summary • Contiguration • Monitor • Aarm • System	Mon	tor > Radio Performani Time Tx -07-23111-25-51+00:00 Lx	:e > 15 J Level (dl	dinutes Bey   Px -24	Level (d	Beij Ra	die Link Quality	9		Auto-re	hesh 🗌 (Refiern)
Ports     Elecorey     Bourning Tree	No	Time	Tx Lev Min.	el (dBin) Max.	Rx Lev Min.	el (dBm) Max.	Block Errors	Error Seconds	Block Error Ratio	LOF Seconds	
MAC TROP     VLAVE	58 67	2014-07-22121-00:00+00:00 2014-07-22121-15:00+00:00	La 97	10.3	-99.0	0.0	8	10	0.0E+00 0.0E+00	74	
<ul> <li>Radio Performance</li> <li>Current</li> </ul>	66 55	2014-07-22721-30:00+00:00 2014-07-22721-45:00+00:00	97 97	10.3	-24.6	-24.0	0	0	0.0E+00 0.0E+00	0	
+15 Months +1 Day	64 63	2014 07-22122 00:00+00:00 2014 07-22122 16:00+00:00	97 97	10.3	24.6	-24.1	0	0	0.0E+00 0.0E+00	0	
Test&Diagnostics     Maintenance	62 51	2014-07-22722 30:00+00:00 2014-07-22722 45:00+00:00 2014-07-22723 00:01+00:00	97 97 96	10.3	-24.6	-24.1	0	0	0.0E+00 0.0E+00 0.0E+00	0	

Monitor > Radio Parameter > 15 Minutes Menu Frame

#### Monitor > Radio Performance > 15 Minutes:

This page provides historical radio performance data measured with 15 minutes window. As maximum, latest 72 hours of historical performance data can be seen.

Time	:	The starting time of the 15 minutes window. The minute is fixed with 0, 15 30 and 45 on every hour.
Tx Level (dBm) Min.	:	Indicates the minimum signal level of radio transmitting in 15 minutes window.
TX Level (dBm) Max.	:	Indicates the maximum signal level of radio transmitting in 15 minutes window.
Rx Level (dBm) Min.	:	Indicates the minimum signal level of radio receiving in 15 minutes window.
Rx Level (dBm) Max.	:	Indicates the maximum signal level of radio receiving in 15 minutes window.
Block Errors	:	Indicates the number of block error in 15 minutes window
Error Seconds	:	Indicates the number of the second that have block error in 15 minutes window.
Block Error Ratio	:	Indicates the ratio of the number of block error in the total number of block in 15 minutes window.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh	:	Click to refresh the page

# Monitor > Radio Performance > 1 Day

A (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	8.0.10/			م ر	) + 🗟 C :	× 🤗 Broa	adOne_GX4000	×	
		F	ujitsu E	Broad	lOne [Naka	GX400 ahara0	0 Series - 01#:]	Ethernet	0- 3
<ul> <li>Summary</li> <li>Configuration</li> </ul>	Mon	itor > R	adio Perf	orman	ice > 1 [	Day		Auto-refr	esh 🔲 Refresh
Monitor     Alarm     System	No	Time	Tx Lev (dBn Min,	vel 1) Max.	Rx (d	Level Bm) Max.	Block Errors	Error Seconds	Block Error Ratio
<ul> <li>Security</li> <li>Spanning Tree</li> <li>MAC Table</li> <li>VLANs</li> <li>Radio Performance         <ul> <li>Current</li> <li>15 Minutes</li> <li>1 Day</li> </ul> </li> <li>Test&amp;Diagnostics</li> <li>Maintenance</li> </ul>	No e	ntries							

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Monitor > Radio Parameter > 1 Day Menu Frame

#### <u>Monitor > Radio Performance > 1 Day:</u>

This page provides historical radio performance data measured with 1 day window. As maximum, latest 2 days of historical performance data can be seen.

Time	:	The starting time of the 1 day window. The time is fixed with 0:00 in every day.
Tx Level (dBm) Min.	:	Indicates the minimum signal level of radio transmitting in 1 day window.
TX Level (dBm) Max.	:	Indicates the maximum signal level of radio transmitting in 1 day window
Rx Level (dBm) Min.	:	Indicates the minimum signal level of radio receiving in 1 day window.
Rx Level (dBm) Max.	:	Indicates the maximum signal level of radio receiving in 1 day window.
Block Errors	:	Indicates the number of block error in 1 day window
Error Seconds	:	Indicates the number of the second that have block error in 1 day window.
Block Error Ratio	:	Indicates the ratio of the number of block error on the total number of block in 1 day window.
Auto-refresh	:	Check this box to refresh the page automatically. Automatic refresh occurs every 3 seconds.
Refresh	:	Click to refresh the page

# Test & Diagnostics

# Test & Diagnostics > Control

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ostics > Control	L			Refresh
Current	Cor	ntrol	Timer	
ick -	Operate	Release	30sec 💌	
Tx-OFF	Operate	Release		
k -	Operate	Release	30sec 💌	
	iostics > Control Current ick - Tx-OFF k -	Inostics > Control Current Control Inck - Operate Tx-OFF Operate k - Operate	Inostics > Control Current Control Inck - Operate Release Tx-OFF Operate Release k - Operate Release	nostics > Control Current Control Timer nck - Operate Release 30sec ▼ Tx-OFF Operate Release k - Operate Release 30sec ▼

Test & Diagnostics > Control Menu Frame

This menu allows you to control of test and diagnosis

Item	:	Radio LoopBack: Operation of Loopback for Radio side. Tx-OFF: Operation of shut-off for radio transmitting. Line LoopBack: Operation of Loopback for Line side.
Current	:	Indicates current condition. The displayed conditions are; <b>Operate</b> : Operation is active. -: Operation is inactive.
Control	:	<b>Operate</b> : Click to operate the item. <b>Release</b> : Click to release the item
Timer	:	Set the remaining time. The Radio LoopBack and the Line LoopBack is released automatically if the time is up. The allowed range is 10 seconds 20 seconds 30 seconds 1 minute 10 minutes 30 minutes 30 minutes 1 hour 3 hours 12 hours 24 hours None (Non auto-release)
		The default value is 30 seconds.
Refresh	:	Click to refresh the page

# Test & Diagnostics > Ping

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	Fujit	tsu BroadC [	One GX4000 Series Nakahara001#:]	- Ethernet	0 🕄
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics <ul> <li>Control</li> <li>Ping</li> </ul> </li> <li>Maintenance</li> </ul>	Test&Diagno IP Address Ping Length Ping Count Ping Interval	0.0.0.0 56 5 1			
		0 D1 //	<b>D</b> : <b>M E</b>		

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Test & Diagnostics > Ping Menu Frame

This menu allows you to issue ICMP PING packets to troubleshoot IP connectivity issues.

After you press, ICMP packets are transmitted, and the sequence number and round trip time are displayed upon reception of a reply. The amount of data received inside of an IP packet of type ICMP ECHO\_REPLY will always be 8 bytes more than the requested data space(the ICMP header). The page refreshes automatically until responses to all packets are received, or until a timeout occurs.

PING server 10.10.132.20, 56 bytes of data.

64 bytes from 10.10.132.20: icmp\_seq=0, time=0ms

64 bytes from 10.10.132.20: icmp\_seq=1, time=0ms

64 bytes from 10.10.132.20: icmp\_seq=2, time=0ms

64 bytes from 10.10.132.20: icmp\_seq=3, time=0ms

64 bytes from 10.10.132.20: icmp\_seq=4, time=0ms

Sent 5 packets, received 5 OK, 0 bad

You can configure the following properties of the issued ICMP packets

IP Address	:	The destination IP Address
Ping Length	:	The payload size of the ICMP packet. Values range from 2 bytes to 1452 bytes.
Ping Count	:	The count of the ICMP packet. Values range from 1 time to 60 times.
Ping Interval	:	The interval of the ICMP packet. Values range from 1 second to 30 seconds
Start	:	Click to start transmitting ICMP packets
New Ping	:	Click to re-start diagnostics with PING

# **Maintenance**

# Maintenance > Restart Devices

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	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0 🕄
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration</li> <li>Data</li> </ul> </li> </ul>	Maintenance > Restart Device Are you sure you want to perform a Restart? Yes No	

#### Maintenance > Restart Devices Menu Frame

You can restart the switch on this page. After restart, the switch will boot normally

- Yes : Click to restart device
- No : Click to return to the Port State page without restarting

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	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	( <mark>)</mark> ?
Ports     Security     Spanning Tree     Bridge Settings     CIST Ports     SyncE     MAC Table     VLAN Translation     VLANs     Monitor     Test&Diagnostics     Maintenance     Restart Device     Factory Defaults     Software     FPGA     Configuration     Data	System restart in progress The system is now restarting. Waiting, please stand by	



# Maintenance > Factory Defaults



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Maintenance > Factory Defaults Menu Frame

You can reset the configuration of the switch on this page. Only the <u>IP</u> configuration is retained. The new configuration is available immediately, which means that no restart is necessary

- Yes : Click to reset the configuration to Factory Defaults
- No
- : Click to return to the Port State page without resetting the configuration

<u>Note:</u> Restoring factory default can also be performed by making a physical loopback between port 1 and port 2 within the first minute from switch reboot. In the first minute after boot, 'loopback' packets will be transmitted at port 1. If a 'loopback' packet is received at port 2 the switch will do a restore to default

#### Maintenance > Software

# Maintenance > Software > Upload

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🚖 Favorites 🏾 🌈 BroadOne_G	X4000	
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0• ?
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>Upload</li> <li>Image Select</li> </ul> </li> <li>FPGA <ul> <li>Configuration</li> <li>Data</li> </ul> </li> </ul>	Maintenance > Software > Upload Browse Upload	

Maintenance > Software > Upload Menu Frame

This page is used to update the software to the latest version.

The versions of software images are displayed, and the alert message to confirm it is displayed. Up-loading begins after clicking OK.

The up-loaded image is stored on the STBY side, and after a few minutes, up-loading is completed.



**NOTICE:** Do not restart or power off the device at this time or the device may fail to function afterwards.

Browse	:	Click to the location of software image

Upload

: Click to upload the software image

### Maintenance > Software > Image Select

	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	6 3
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>Upload</li> <li>Image Select</li> <li>FPGA</li> <li>Configuration</li> <li>Data</li> </ul> </li> </ul>	Maintenance > Software > Image Select         ACT Image         Image       managed         Version       V01L01C06-01a         STBY Image       managed.bk         Version       V01L51C06-01a         Activate STBY Image & Reset       Cancel	

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Maintenance > Software > Image Select Menu Frame

This page provides information about the ACT software image and the STBY software image in the device, and allows you to select to the STBY software image.

Reset operates when switching.

The web page displays two tables with information about the ACT software image and the STBY software image.

Note: 1.In case the ACT image is alternate image, only the "ACT Image" table is shown. In this case, the "Activate STBY Image & Reset" button is also disabled.

Image	:	The flash index name of the software image. The name of primary image is <b>managed</b> , the alternate image is named <b>managed.bk</b> .
Version	:	The version of the software image, and the date where the software was produced.
Activate STBY Image & Reset	:	Activate STBY Image & Reset: Click to use the STBY image. This button may be disabled depending on system state.
Cancel	:	Cancel activating the STBY image. Navigates away from this page.

#### Maintenance > FPGA

# Maintenance > FPGA > Upload

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	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0+ ?
Summary     Configuration     Monitor     Test&Diagnostics     Maintenance     Restart Device     Factory Defaults     Software     Upload     Image Select     FPGA     Upload     Image Select     Configuration     Data	Maintenance > FPGA > Upload Browse Upload	

Maintenance > FPGA > Upload Menu Frame

This page is used to update the FPGA data to the latest version.

The versions of FPGA data images is displayed, and the alert message to confirm it is displayed. Up-loading begins after clicking OK.

The up-loaded image is stored on the STBY side, and after a few minutes, up-loading is completed.

**NOTICE:** Do not restart or power off the device at this time or the device may fail to function afterwards.

Browse :		Click to the location of FPGA imag	je
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Upload

: Click to upload the FPGA image

# Maintenance > FPGA > Image Select

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	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA <ul> <li>Upload</li> <li>Image Select</li> </ul> </li> <li>Configuration</li> <li>Data</li> </ul></li></ul>	Maintenance > FPGA > Image Select         ACT Image         Image       managed         Version       V00L05C00         STBY Image       managed.bk         Version       V00L05C00         Activate STBY Image & Reset       Cancel	
	Maintenance > FPGA > Image Select Menu Frame	

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This page provides information about the ACT FPGA data image and the STBY FPGA data image in the device, and allows you to select to the STBY FPGA data image. Reset operates when switching. The web page displays two tables with information about the ACT FPGA data image and the STBY FPGA data image.

Note: 1.In case the ACT image is alternate image, only the "ACT Image" table is shown. In this case, the "Activate STBY Image & Reset" button is also disabled.

Image	:	The flash index name of the FPGA data image. The name of primary image is <b>managed</b> , the alternate image is named <b>managed.bk</b> .
Version	:	The version of the FPGA data image.
Activate STBY Image & Reset	:	Activate STBY Image & Reset: Click to use the STBY image. This button may be disabled depending on system state.
Cancel	:	Cancel activating the STBY image. Navigates away from this page.

#### Maintenance > Configuration

# Maintenance > Configuration > Save

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	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0+ 📀
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration <ul> <li>Save</li> <li>Upload</li> <li>Data</li> </ul> </li> </ul></li></ul>	Maintenance > Configuration > Save Save Configuration	

Maintenance > Configuration > Save Menu Frame

You can save/view the device configuration. The configuration file is XML format. When the Save Configuration button is clicked, the file of the name of config\_yyyymmdd\_hhmiss.xml is saved.

The example of the file name) config\_20120624\_160745\_.xml yyyy: year mm: month dd: day hh: hour mi: minute ss: second



**NOTICE**: Do not edit the XML file. The up-loading of the edited XML file is unsupported. The device might malfunction even if up-loading is normally completed

Save Configuration : Click to save the configuration file

### Maintenance > Configuration > Upload

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6 BroadOne_GX4000	👔 🔹 🗟 🔹 📾 🔹 Page 🗸 Safety 🗸 Tools	• @• 🛱 🕉
	Fujitsu BroadOne GX4000 Series - Ethernet	0- 2
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration <ul> <li>Save</li> <li>Upload</li> <li>Data</li> </ul> </li> </ul></li></ul>	Maintenance > Configuration > Upload Browse Upload	
Done	👩 😜 Internet 🖉	💐 100% 🔹
IV	laintenance > Configuration > Upload Menu Frame	

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You can upload the device configuration. The configuration file is XML format. When the Upload button is clicked, the file of the configuration is up-loaded.

The example of the file name) config\_20120624\_160745\_.xml yyyy: year mm: month dd: day hh: hour mi: minute ss: second

**NOTICE:** Do not edit the XML file. The up-loading of the edited XML file is unsupported. The device might malfunction even if up-loading is normally completed

Browse	:	Click to save the configuration file
Upload	:	Click to upload the configuration file

#### Maintenance > Data

# Maintenance > Data > CSV Download

		× ⊕ ⊕ ☆ ⊕
	Fujitsu BroadOne GX4000 Series - Ethernet [Nakahara001#:]	0- 3
<ul> <li>Summary</li> <li>Configuration</li> <li>Monitor</li> <li>Test&amp;Diagnostics</li> <li>Maintenance <ul> <li>Restart Device</li> <li>Factory Defaults</li> <li>Software</li> <li>FPGA</li> <li>Configuration</li> <li>Data <ul> <li>CSV Download</li> </ul> </li> </ul></li></ul>	Maintenance > Data > CSV DownLoad Download FILE Data Syslog(Current) Save CSV Data	

Maintenance > Data > CSV Download Menu Frame

You can download information selected with Download FILE Data. The data file is CSV file format. When the Save CSV Data button is clicked, the file of the name of kkkk\_yyyymmdd\_hhmiss.csv is saved.

Download File Data :	Syslog: Data of Syslog is downloaded. (Data including the old information is downloaded when there is an old information.) Radio Performance Data (15min): Radio Performance Data of 15min is downloaded. Radio Performance Data (1Day): Radio Performance Data of 1Day is downloaded. The example of the file name) syslog_20120624_160745xml kkkk: syslog/15minpm/1daypm yyyy: year mm: month dd: day hh: hour mi: minute
Save CSV Data	Click to start CSV download

# 5.6 SNMP Agent Function

BroadOne GX4000 Impulse radio equipment has the SNMP agent function in addition to Web-based local terminal (WebLT) function. SNMP agent function supports SNMP v1 and SNMP v2c.

Table 5.3 shows the MIB II support list.

No.	Group	Remarks
1	System (1.3.6.1.2.1.)	
2	Interfaces (1.3.6.1.2.1.2)	
3	lp (1.3.6.1.2.1.4)	ipForwarding is NOT supported.
4	Icmp (1.3.6.1.2.1.6)	
5	Tcp (1.3.6.1.2.1.6)	
6	Udp (1.3.6.1.2.1.7)	
7	Snmp (1.3.6.1.2.1.11)	
8	Rmon (1.3.6.1.2.1.16)	Only three groups are supported; rmonEthernetStatistics group rmonHistoryControl group rmonEthernetHistory group
9	ifMIB (1.3.6.1.2.1.31)	Only ifTable group is supported

Table 5.3 MIB II Support Li
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# Appendix-A

# **Notice for Licensing**

This system contains source code from the following Open-Source components. Some code has been altered to work with the embodying system.

- Dropbear: SSH Server
- MD5: MD5 hash implementation
- MooTools: JavaScript Framework
- NET-SNMP: SNMP Agent
- NET-SNMP RMON: NET-SNMP RMON utilities
- NTP Network Time Protocol: NTP Protocol
- OpenSSL: Toolkit implementing SSL v2/v3 and TLS protocols
- avltree: Self-balancing binary search tree
- eCos RTOS: Real-time OS for embedded applications

\_\_\_\_\_

Name : Dropbear

Description : SSH Server

License type : MIT, BSD, OpenSSL

Dropbear contains a number of components from different sources, hence there are a few licenses and authors involved. All licenses are fairly non-restrictive.

The majority of code is written by Matt Johnston, under the license below.

Portions of the client-mode work are (c) 2004 Mihnea Stoenescu, under the same license:

Copyright (c) 2002-2006 Matt Johnston Portions copyright (c) 2004 Mihnea Stoenescu

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\_\_\_\_

LibTomCrypt and LibTomMath are written by Tom St Denis, and are Public Domain.

=====

sshpty.c is taken from OpenSSH 3.5p1,

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"As far as I am concerned, the code I have written for this software can be used freely for any purpose. Any derived versions of this software must be clearly marked as such, and if the derived work is incompatible with the protocol description in the RFC file, it must be called by a name other than "ssh" or "Secure Shell". "

\_\_\_\_

loginrec.c

loginrec.h

atomicio.h

atomicio.c

and strlcat() (included in util.c) are from OpenSSH 3.6.1p2, and are licensed under the 2 point BSD license.

loginrec is written primarily by Andre Lucas, atomicio.c by Theo de Raadt.

strlcat() is (c) Todd C. Miller

=====

Import code in keyimport.c is modified from PuTTY's import.c, licensed as follows:

PuTTY is copyright 1997-2003 Simon Tatham.

Portions copyright Robert de Bath, Joris van Rantwijk, Delian Delchev, Andreas Schultz, Jeroen Massar, Wez Furlong, Nicolas Barry, Justin Bradford, and CORE SDI S.A.

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Name : MD5

Description : MD5 hash implementation

License type : BSD

Copyright (c) 2003-2005, Jouni Malinen <j@w1.fi>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License version 2 as published by the Free Software Foundation.

Alternatively, this software may be distributed under the terms of BSD license.

Name : MooTools

Description : JavaScript Framework

License type : MIT

The MIT License

Copyright (c) 2006-2009 Valerio Proietti, <http://mad4milk.net/>

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Name : NET-SNMP

Description : SNMP Agent

License type : NET-SNMP (BSD-Style)

Various copyrights apply to this package, listed in 5 separate parts below. Please make sure that you read all the parts. Up until 2001, the project was based at UC Davis, and the first part covers all code written during this time. From 2001 onwards, the project has been based at SourceForge, and Networks Associates Technology, Inc hold the copyright on behalf of the wider Net-SNMP community, covering all derivative work done since then. An additional copyright section has been added as Part 3 below also under a BSD license for the work contributed by Cambridge Broadband Ltd. to the project since 2001. An additional copyright section has been added as Part 4 below also under a BSD license for the work contributed by Sun Microsystems, Inc. to the project since 2003.

Code has been contributed to this project by many people over the years it has been in development, and a full list of contributors can be found in the README file under the THANKS section.

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#### **Appendix-A**

Name : NET-SNMP RMON

Description : NET-SNMP RMON utilities

License type : Alex Rozin, Optical Access

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Name : NTP - Network Time Protocol

Description : NTP Protocol

License type : NTP

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Author: James da Silva, Systems Design and Analysis Group Computer Science Department University of Maryland at College Park

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Name : OpenSSL

Description : Toolkit implementing SSL v2/v3 and TLS protocols

License type : OpenSSL

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Name : avltree

Description : Self-balancing binary search tree

License type : MIT

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Name : eCos RTOS

Description : Real-time OS for embedded applications

License type : Modified GPL

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