



IPWireless P1D Module Integration Instructions

DRAFT

V00.02



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P1D Broadband Module Integration

1 General

1.1 Approvals and Dates

	Approval Date
W. J. Jones	

1.2 Change Record

Date	Version	Author	Reason For Change Issue
06/11/2007	00.00	PFW	New Document.
24/01/2007	00.01	PFW	Update for external antenna.
05/02/2008	00.02	PFW	Typographical changes.

1.3 Acronyms

Term	Definition
LED	Light Emitting Diode
MPE	Maximum Permissible Exposure
OEM	Original Equipment Manufacturer
P1D	Phase 1D
SIM	Subscriber Identity Module
TDD	Time Division Duplex
UMTS	Universal Mobile Telephone System
USB	Universal Serial Bus

1.4 External References

Ref ()	Number	Title
1	FCC Part 27	

Note: Where a reference is undated, the latest version applies



P1D Broadband Module Integration

2 Introduction

This document describes the method of integrating the IPWireless P1D Broadband module into an OEM product.

2.1 Scope of Document

This document applies to the IPWireless P1D Broadband module only.

2.2 Overview of Module

The IPWireless P1D Broadband module provides a complete UMTS TDD wireless modem solution and only requires the application of DC power and suitable data connection. The module is designed to minimise the time and resource required to integrate.

3 Module Connections

3.1 Data Interface J2

The IPWireless P1D Broadband module is provided with an 18 pin data connector for connection to the external application. This connection supports the following interface types and these are described below.

3.1.1 Universal Serial Bus

The data interface provides a USB 1.1 interface. This is available on pins 1-4 of the data connector.

3.1.2 Ethernet

The data interface provides a 10Mbps Ethernet interface on pins 5-8, power is provided on pin 11 if a link active LED is required.

3.2 J2 Connector

3.2.1 Connector Type

The mating connector is a Matsushita 18-W AXR30241B101.

3.2.2 Pin Out

Connector Pin	Description	Comment
1	USB 5V In	
2	USB Ground	
3	USB D-	
4	USB D+	
5	Ethernet RXP	
6	Ethernet RXN	
7	Ethernet TXP	
8	Ethernet TXN	
9	Not Used	
10	Not Used	
11	Ethernet Transformer Power	
12	Serial RTS	
13	Serial RXD	
14	Serial DSR	

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15	Serial CTS	
16	Serial TXD	
17	DTE Ground	
18	Chassis Ground	
G1, G2	Chassis Ground	

Table 1: 18 way Data Connector

3.3 DC Power Input J1

The module requires a DC supply of 5VDC at upto 1A, the input voltage is required to be with $\pm 5\%$ of nominal voltage. The connector type is a standard DC plug for 0.65mm centre pin configured as centre positive.

3.4 Battery Contact J3

The module provides board contacts to allow an external battery pack to be used, connection to these contact is made using spring fingers. The recommended battery is a lithium ion pack nominal voltage 3.7VDC, capacity 650mAh.

3.5 SIM Holder Socket 2

The IPWireless P1D Broadband module supports SIM authentication if required.

4 Mechanical

The IPWireless P1D Broadband module is provided with 3 designated mounting points, the board should be rigidly mounted using stand-offs with a minimum clearance of 10mm from any other components.

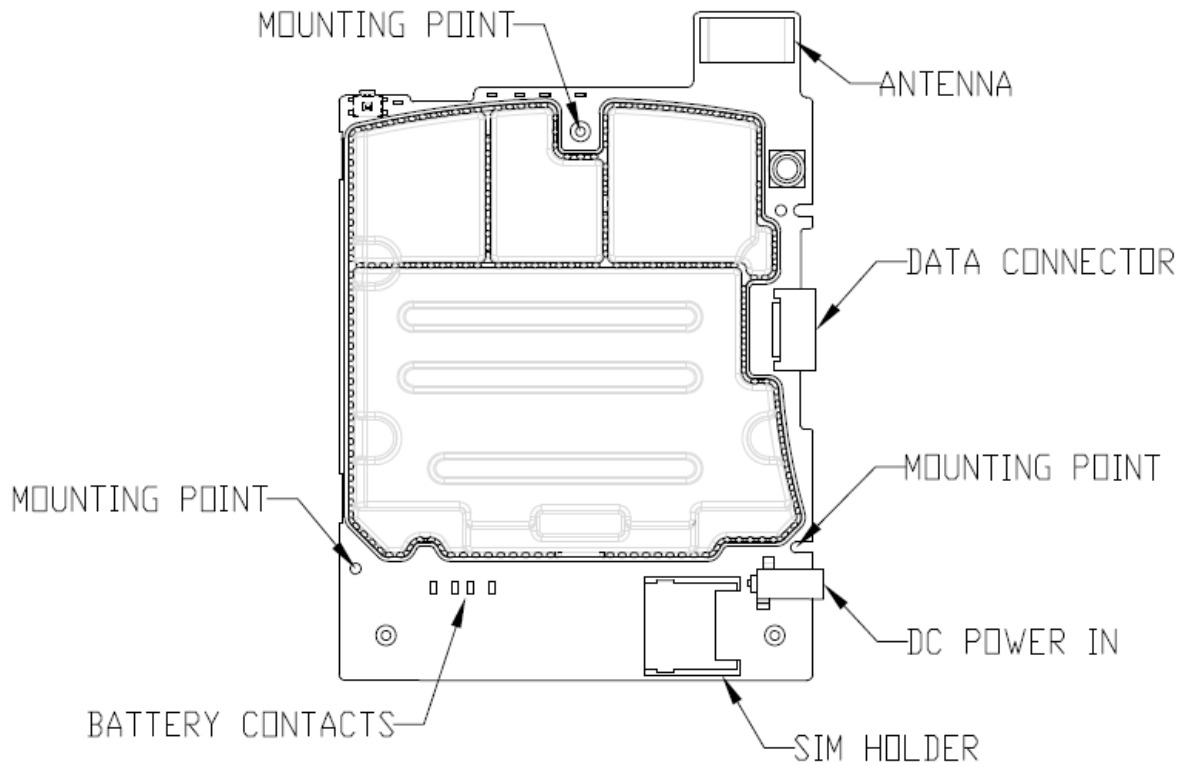


Figure 1: P1D Module

5 Regulatory Information

5.1 Compliance with FCC Rules and Regulations

The IPWireless P1D Broadband module is certified against FCC Part 27 for operation in the 2496-2690MHz frequency allocation. The module is certified under FCC ID: PKTP1DKF2 and is only certified for use with either an integral or external antenna, the maximum antenna gain allowed is defined on the FCC Grant of Certification.

If the FCC ID is not visible from outside of the host device, then an additional label is required on outside of the host device stating 'Contains FCC ID: PKTP1DKF2'

IMPORTANT: Manufacturers of devices containing the IPWireless P1D Broadband module are advised to

1. Clarify any regulatory questions.
2. Have their final product tested and approved for FCC compliance.
3. Include instructions with the final product regarding meeting RF Exposure requirements of the FCC rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not covered in this manual must be approved in writing by the Manufacturer. Changes or modifications made without written approval may void the user's authority to operate this equipment.

5.2 Exposure to Radio Frequency Signals

To comply with the FCC RF exposure rules, the UE P1D wireless broadband modem has been evaluated against the Maximum Permissible Exposure (MPE) limits defined in Section 1.1310 of the FCC rules for the uncontrolled environment. During normal operation, all persons should maintain a distance of at least 20cm from the antenna to ensure compliance with the MPE limits.