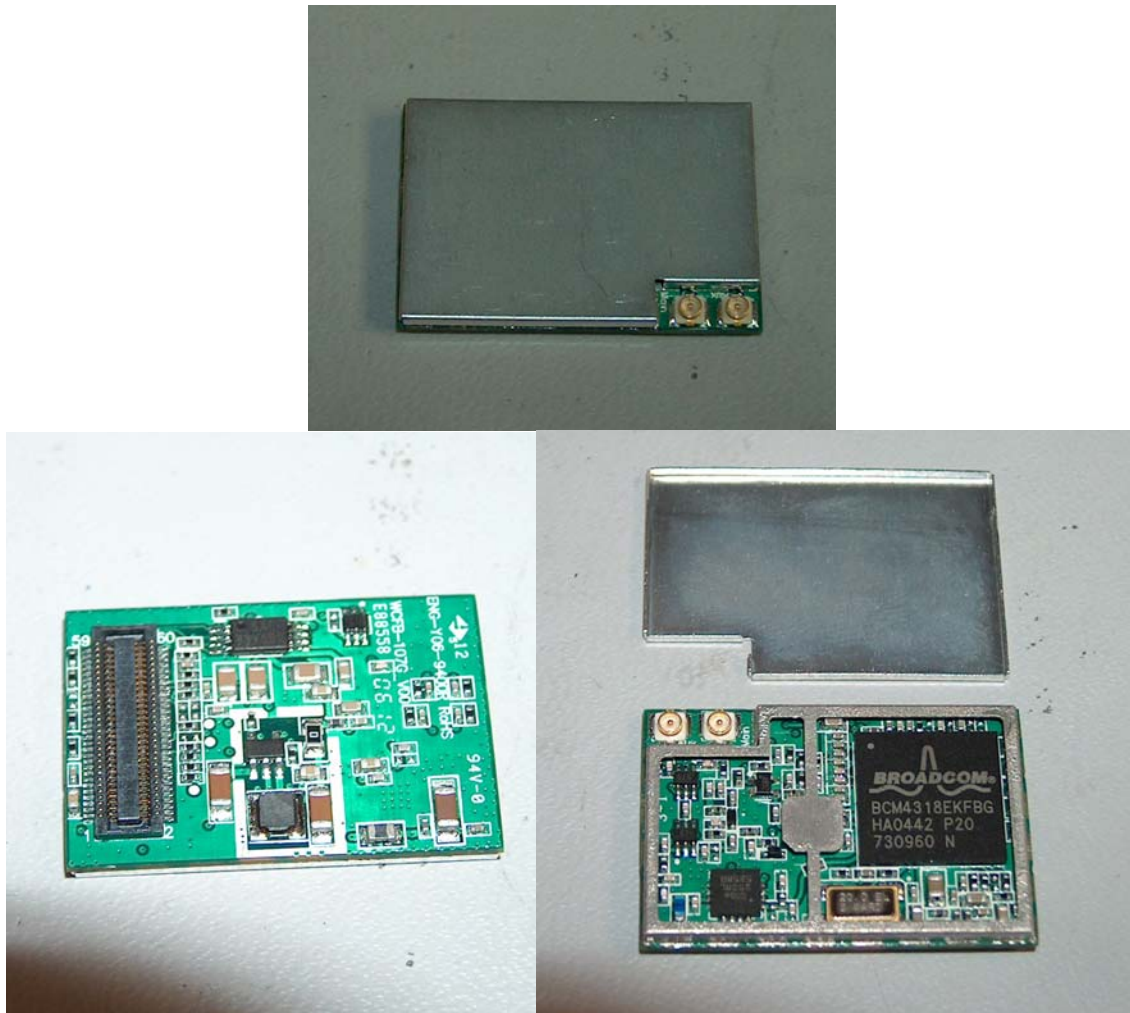**Product Brief:**
SDC-MCF10G 802.11g Mini-Compact Flash Module

The SDC-MCF10G is designed specifically for integration in small form factor application specific devices and the challenging RF environments in which they operate. Shown here clockwise from the top is the antenna connector side of the device, the same side wit the shield removed and the host connector side.

Providing reliable wireless network connectivity in vertical-market environments such as factories, warehouses, and retail locations is a challenge. Long distances between client devices and the wireless LAN infrastructure is the norm. The prevalence of metal in machinery and shelving creates a far greater degree of multipath propagation than what is found in a home or office.

While these challenges are great, so too is the fundamental criticality of trouble-free operation. The application-specific devices (ASDs) such as portable data terminals, bar code scanners, and portable

printers used in vertical-markets run business-critical applications. Loss of wireless LAN connectivity means a loss of productivity and profitability.

Reliable connectivity hinges on the WLAN adapter, or radio, in every ASD. The Summit SDC-MCF10G is designed specifically for integration into small form factor business-critical ASDs that are used in harsh vertical-market environments. Unlike consumer-grade and office-grade products, the SDC-CF10G delivers the performance, reliability, security, and manageability required by these devices and their operating environments. The SDC-MCF10G provides all the performance and the complete software capabilities of the full size SDC-CF10G compact flash module in a much smaller package that better allows for integration into smaller, more ergonomic ASDs.

Key hardware and software features of the SDC-MCF10G include:

- **Form factor:** The Mini Compact Flash form factor of the radio is ideal for embedding into small, light, and ergonomic ASDs that are designed to increase employee productivity

- **Operating system support:** NDIS 5 and 5.1 device drivers assure trouble-free operation with Windows CE 4.2 and 5.0 as well as Windows Mobile 2003 and 5.0, and a software developer's kit enables support for non-standard operating systems

- **802.11g:** Supporting the IEEE 802.11g protocol, the SDC-CF10G provides for a maximum data rate of 54 megabits per second (Mbps) to maximize data transfer and overall wireless LAN performance

- **Low power:** With low power consumption, the SDC-CF10G maximizes ASD battery life and provides for full-shift operation

- **Range:** Enhanced transmit and receive capabilities and maximized delay spread deliver maximize range, performance and reliability, even in high multipath environments

- **Security:** 802.11i/WPA2 compliance provides for the highest level of interoperable wireless LAN security available. Support for a range of authentication types including EAP-FAST, EAP-TLS, LEAP, PEAP-GTC and PEAP-MSCHAPv2 allows for network authentication via digital certificates, passwords, and one-time passwords

- **Administration:** The Summit Client Utility enables a user or administrator to view and configure all radio operation and security settings as well as view status and troubleshoot issues. An application programming interface enables administration through popular tools such as Wavelink Avalanche

- **Certifications:** Wi-Fi Alliance certification ensures interoperability and conformance to IEEE 802.11 specifications. Cisco Compatible Extensions Version 3 certification delivers full interoperability with the industry's leading wireless LAN infrastructure

Product Specifications	
Network Standard	IEEE 802.11g
Data Rates Supported	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mbps
Frequency Band	2.4 to 2.4897 GHz

Network Architecture Types	Infrastructure and ad hoc
Wireless Medium	Direct Sequence-Spread Spectrum (DSSS) and Orthogonal Frequency Divisional Multiplexing (OFDM)
Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)
Modulation	BPSK @ 1, 6 and 9 Mbps QPSK @ 2, 12 and 18 Mbps CCK @ 5.5 and 11 Mbps 16-QAM @ 24 and 36 Mbps 64-QAM @ 48 and 54 Mbps
Operating Channels	FCC: 11 ETSI: 13 Japan: 13
Non-overlapping Channels	Three
System Interface	16-bit Compact Flash with 60-pin Molex 54722-0607 connector
Antenna Interface	Two U.FL (Hirose) connectors for antenna diversity
Chipset	Broadcom BCM4318E
Transmit Power Settings *Maximum available transmit power will vary according to individual country regulation. All values nominal, +/-2dBm*	DSSS: 19 dBm (80mW) 18 dBm (60 mW) 16 dBm (40 mW) 13 dBm (20 mW) OFDM: 15 dBm (30 mW) 14 dBm (22.5 mW) 12 dBm (15 mW) 9 dBm (7.5 mW)
Typical Receiver Sensitivity	1 Mbps: -96 dBm 2 Mbps: -95 dBm 5.5 Mbps: -94 dBm 6 Mbps: -94 dBm 9 Mbps: -91 dBm 11 Mbps: -90 dBm 12 Mbps: -88 dBm 18 Mbps: -86 dBm 24 Mbps: -83 dBm 36 Mbps: -78 dBm 48 Mbps: -76 dBm 54 Mbps: -75 dBm
Delay Spread	600 ns @ 1 Mbps 500 ns @ 2 Mbps 400 ns @ 5.5 Mbps 400 ns @ 6 Mbps 400 ns @ 9 Mbps 200 ns @ 11 Mbps 350 ns @ 12 Mbps 350 ns @ 18 Mbps 250 ns @ 24 Mbps 250 ns @ 36 Mbps 150 ns @ 48 Mbps 150 ns @ 54 Mbps
Input Power Requirements	3.3 +/- 5%

Typical Power Consumption (at maximum transmit power setting)	Transmit: 440 mA (1450mW) Receive: 175 mA (580mW) Standby: 15 mA (50mW)
Environmental	Operating Temperature -22° to 167°F (-30° to 75°C) Humidity (non-condensing) 10 to 90%
Status Indicators	None
Dimensions	0.87" in (22 mm) wide 1.26" (32 mm) length (connector side) 0.04" (0.9 mm) thick (maximum)
Weight (approximate)	0.32 oz (9 g)
Mounting	60 pin connector and through hole (non-metallic screw recommended)
Operating Systems Supported	Windows Mobile 2005, Win CE 5.0 Windows Mobile 2003, Win CE 4.2 Windows XP (est. Q3CY2006) SDK for additional driver support
Driver Support	NDIS 5.1 NDIS 5.0 SDK for additional driver support
Security	Compliant with Wi-Fi Protected Access (WPA) and IEEE 802.11i (WPA2) Authentication: Support for a full range of 802.1X (EAP) types, including: EAP-TLS PEAP-MSCHAPv2 PEAP-GTC LEAP EAP-FAST Encryption: Support for: Static, pre-shared, and dynamic encryption keys 40-bit and 128-bit keys WEP WPA: TKIP WPA2: AES
Certifications	Wi-Fi Alliance Interoperability 802.11b, 802.11g, WPA, 802.11i/WPA2 Cisco Compatibile Extensions (CCX) Version 3 compatibility

Compliance	Safety: UL 1950 Radio Approvals: FCC Part 15.247, 15.407 RSS-210 (Canada) EN 300.328, EN 301.893 (Europe) ARIB-STD 33 (Japan) ARIB-STD 66 (Japan) ARIB-STD T71 (Japan) AS/NZS 4771, 4268.2 (Australia and New Zealand) EMI and Susceptibility (Class B): FCC Part 15.107 and 15.109 ICES-003 (Canada) VCCI (Japan) EN 301.489-1 and -17 (Europe) AS/NZS 3548 Other: IEEE 802.11g FCC Bulletin OET-65C RSS-102 Reduction of Hazardous Substances (RoHS)
Regulatory Domain Support	FCC ETSI TELEC (Japan)
Warranty	Limited Lifetime
Availability	Prototypes: Q4CY2005 Production: Q2CY2006

SUMMIT
DATA COMMUNICATIONS

Summit Data Communications, Inc. ● 526 South Main Street, Suite 411, Akron, Ohio 44311
Phone 330-434-7929 ● Fax 330-434-7931

V2.2