

# Merlin™ X950D



## HSDPA & HSUPA Mobile Broadband ExpressCard with Diversity & Equalizer

Merlin X950D HSDPA/HSUPA ExpressCard, powered by the Qualcomm MSM7200 chipset, is a smaller and faster version of a PCMCIA card that uses the ExpressCard/34 form factor. This global card, tri-band HSDPA/UMTS and quad-band EDGE/GPRS, allows for mobile broadband connections up to 7.2 Mbps. It is HSUPA-ready; a firmware upgrade will be made available for HSUPA that will allow upload speeds up to 2.1 Mbps.



This high performance card, with an integrated antenna, is sturdy in that there are no moving parts. The X950D offers both diversity and equalizer support with diversity on the 2100 MHz band; optimized for Europe and other parts of the world that use this frequency. No CD is required to install the software; it is flashed on the card thus simplifying user installation. This card can be used in both ExpressCard/34 and 54 slots; and with Novatel adapters, in PCMCIA and USB slots.

### Worldwide Mobile Broadband

Peak download speeds to 7.2 Mbps for web surfing, e-mail, VPNs, and more. Use in home, office, on the road – virtually anywhere for on the go mobility. Works in North America, Europe and countries around the world in supported bands.

### HSUPA-Upgradeable

Firmware upgrade for 2.1 Mbps HSUPA upload speed.

### Small Compact Card

Uses the ExpressCard/34 form factor which is 40% smaller than a PCMCIA card and also takes advantage of the high bandwidth serial USB 2.0 interface. This 26-pin card is the newly adopted format for laptop vendors.

### No CD Required to Install Software

Mobilink™ Lite Connection Manager will be pre-installed, flashed in the Express Card's memory. Dashboard customization as well as multiple languages is also available. MobiLink™ SDK is available for customizing the dashboard and for easy integration with third party dashboards.

### Branding & Customization Available

Branding on ExpressCard, packaging, collateral, language, and software to keep the offering in sync with OEM or operator's marketing and branding strategies.

### Address Multiple Market Segments with One Product

X950D fits in both ExpressCard/34 and 54 slots. With Novatel Wireless adapters, operators and OEMs can also sell for use in PCMCIA and USB slots. This simplifies inventory, carrying costs, and customer service in that this offering can be made to both desktop and laptop users.

### Improve Coverage

An external antenna can be added to improve reception and minimize interference.



# Merlin™ X950D

## Technical Specifications

### HSDPA & HSUPA Mobile Broadband ExpressCard with Diversity & Equalizer

#### Technology/Bands

- Tri-band HSDPA/UMTS - 850/1900/2100 MHz
- Quad-band EDGE/GPRS - 850/900/1800/1900 MHz

#### Advanced Technologies

- Receive Equalization - improves performance in noisy & highly mobile environments
- Receiver Diversity on HSDPA/UMTS 2100 MHz band - improves performance at cell edges
- GPS option

#### Data Speeds

- Supports 7.2 Mbps Downlink & HSUPA upgrade for 2.1 Mbps uplink; 384 kbps upload speed at launch
- Firmware upgrades for HSUPA upgrade for 2.1 Mbps uplink

#### Power Class

- WCDMA 850/1900/2100 – Power Class 3
- GPRS 850/900 – Power Class 4
- GPRS 1800/1900– Power Class 1
- EDGE 850/900/1800/1900 – Power Class E2

#### Dimensions and Weight

- 112 x 34 x 11 mm (4.4 x 1.3 x 0.4 in)
- 29 g (1.0 oz)

#### Form Factor

- ExpressCard/34
- USIM\* card slot (card size: 25 mm x 15 mm)

#### Visual Indicator (LED)

- 5-color LED indicator for real-time service status, technology modes, and error conditions

#### Antenna

- Built-in 5 bands (integrated)
- High efficiency broadband
- One piece with integrated antenna

#### Power consumption

- HSDPA/UMTS - 1.0 amps (nominal); 1.3 amps peak
- Voltage 3.0 v to 3.3 v
- Idle & low power modes (USB Selective Suspend)

#### Environmental

- Operating temperature: 0°C to 55°C (32°F to 131°F)
- Storage temperature: -20°C to 65°C (-4°F to 149°F)
- EMI Shielding

#### Applications

- Internet, Intranet
- e-mail
- Connection logging
- VPN

#### Connection Manager

- No CD installation - software in flash memory
- Dialup Connection
- Signal strength
- Connection Status
- Pre-configured Network Profile
- Power Management – standby & hibernate selective suspend
- MobiLink SDK - A variety of features including branding can be customized; minimal integration needed for third party dashboards.

#### Standards/Approvals/Certifications

- 3GPP Release 99 for GSM/GPRS
- 3GPP Release 5 for HSDPA
- FCC parts 2, 15, 22 & 24
- CE Marking
- GCF
- PTCRB
- GSM Phase 2+
- Microsoft WHQL
- ExpressCard™ Compliant
- IOT Compliance
- R&TTE Directive 1999/5/EC (health, safety, EMC, spectrum) Compliant
- RoHS Directive 2002/95/EC Compliant
- WEEE Directive 2002/95/EC Compliant

#### Operating Systems Supported

- Windows® 2000, XP & Vista
- Mac OS X 10.4 Connection Utility\*\*
- Linux 2.6\*\*



#### Minimum System Requirements

- Card Slot: ExpressCard/34/54 (with a Novatel Merlin adapter - USB or PCMCIA slot can be used)
- Hard Drive: 14 MB
- RAM: 32 MB
- Browser: Microsoft Internet Explorer 6.0 or higher

#### Standard Package Contents

- Merlin X950D ExpressCard Modem
- User Guide
- Quick Start Guide
- Plastic storage case
- Retail packaging
- Branding and customization available for packaging, collateral, language, and software settings

#### Accessories

- External antenna - Hirose MS-151 connector
- Merlin XCA-2 - adapts ExpressCard to PCMCIA Type II form factor for laptops without ExpressCard slot
- Merlin XUA-1 - adapts ExpressCard for use in USB slot

For More Information:  
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ISO 9001:2000 Certified  
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\* SIM card provided by operator upon service subscription.

\*\* MobiLink software is for Windows use only. Drivers available for MAC and Linux support.