USR3516-EMU
COURIER® MODEMULATOR™ EXPANSION CARD
ANALOG TO CELLULAR MODEM EMULATOR

The new USRobotics® Courier® Modemulator™ Expansion Card when used with the USR M2M Cellular Gateway is a drop-in cellular replacement for legacy analog systems that require peer-to-peer connectivity[†]. Emulating a dial-up modem allows equipment to seamlessly connect over a cellular network instead of over the PSTN in legacy M2M applications. Existing legacy hardware and software systems remain untouched when used with the Modemulator — providing extended product life and simplified cellular deployments. Compatibility with both the PSTN and packet switched data networks provides network flexibility that allows an open ended transition plan and eliminates the need for a system overhaul — saving both time and money. By providing a 2-in-1 device, analog customers can transition select sites to cellular in the most efficient and cost-effective way while utilizing the network that is right for the situation. USR's Modemulator provides reliable, secure connections for mission critical M2M applications.

USRobotics®
A Division of UNICOM®Global

Easy Conversion of Legacy Dial-up or Leased Line Solutions to the Cellular Network

Multiple Modes	• Peer-to-Peer mode[†] provides true drop-in replacement • Single ended mode for connecting with traditional TCP Client or Server • Bypass mode for serial gateway operation • Send commands to the remote Modemulator with remote command mode
Simplified Conversion	• No need to install middleware or upgrade legacy communications software that expects analog modem & PSTN • With an optional serial modem, initiate and answer connections over the PSTN to sites with analog modems • Support for a "mixed network" of both analog and cellular devices allows gradual modem replacement • Unified interface and protocol for connecting both cellular and analog sites • Continue to use the USR M2M Cellular Gateway after transition complete
Modem Emulation	• Compatible with common Hayes modem AT commands • Generates modem result codes including RING, RINGING, CONNECT, NO CARRIER, NO DIALTONE, and BUSY • Outbound and inbound calling • Supports baud rates from 300 to 115.2k bps • Peer-to-peer connections • Stores up to 7,200 phone numbers/IP addresses • Direct IP dialing • Emulate leased line operation[‡] • RS-232 break signal handling[‡]

Wireless	• When installed in the USR M2M Cellular Gateway (USR3510 or USR803510)
	  • 3G UMTS or CDMA2000/UMTS *
	  • 2G GSM or CDMA/GSM *
	  • Configure locally with intuitive embedded GUI
	  • Manage remote device's software and configuration with free cloud application
	  • Internal SIM slot
	  • Persistent connectivity and auto reboot and recovery

Security & Reliability	• Required private cellular network ensures continued secure connections • Login banner and security warning banner • Prompted password access • Caller ID screening • Dialback security[‡]
Easy Setup	• Fast implementation and deployment in analog based solutions • Easy configuration using familiar AT commands in the CLI
Advanced Features	• Auto-switchover to an attached dial-up modem for PSTN connections

Benefits

- Peer-to-Peer Cellular Connections
- Simplified Analog to Cellular Conversion
- Mixed Networks
- Emulate Modem and Convert a Phone Number to an IP Address
- Extend Product Life of Legacy Systems
- Leased line compatibility
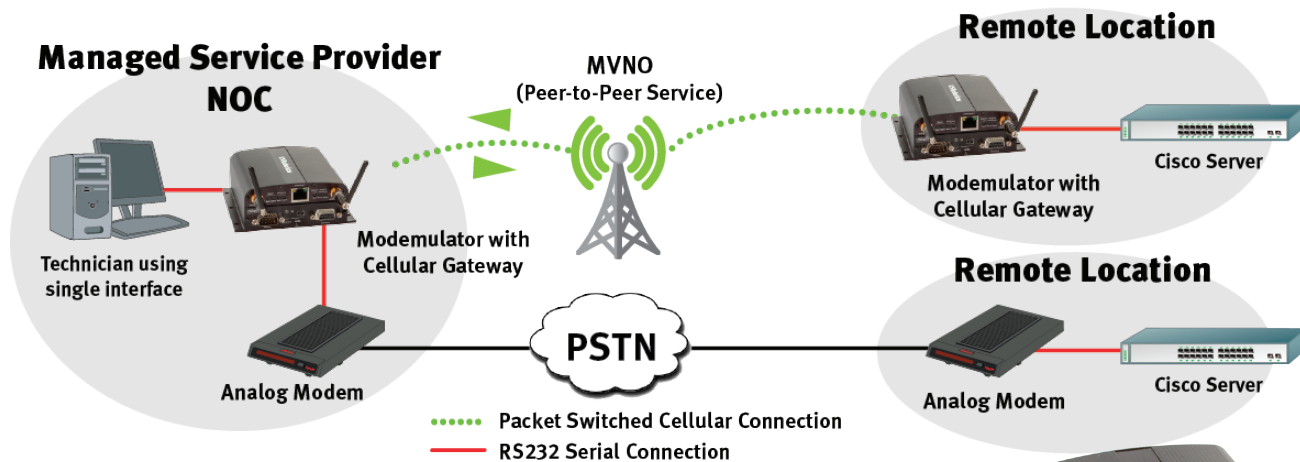
Applications

- Automation
- ATMs
- Digital Signage
- Home Healthcare
- Point of Sale
- Remote Management
- SCADA Kiosks
- Security Systems
- Utilities

* Dual radio is not available on USR803510 or USR803520.
† Wireless Master Service, peer-to-peer routing, or device-to-device routing service is required for the peer-to-peer functionality.
‡ Features available on firmware version 1.0.02 and higher. Available for download at support.usr.com/support/3516-emu

Modemulator M2M Analog & Cellular Out of Band Solution

USR3516-EMU
COURIER MODEMULATOR EXPANSION CARD

SPECIFICATIONS & STANDARDS

GENERAL
- Expansion card compatible with the primary slot of the USR M2M Cellular Gateway
- Custom USR software for the USR M2M Cellular Gateway

PHYSICAL
- DTE interface: 1 RS-232 DB9 Male connector
- DCE interface: 1 RS-232 DB9 Female connector
- 2 LEDs indicators: system connect status, operating mode
- 1 mode switch: Modemulator/Gateway

SERIAL PORT RATINGS
- Terminal Port RS-232C DCE: Auto-baud detection of 115200, 57600, 38400, 19200, 9600, 4800, 2400, 1200, and 300 bps
- Modem Port RS-232C DTE: 115200, 57600, 38400, 19200, 9600, 4800, 2400, 1200, and 300 bps

DEVICE SECURITY
- Connects over a secure private network
- Support for 1 Administrator account and 9 User accounts
- Password login
- Caller ID screening
- Dialback security‡
- Configurable security warning banner (up to 256 characters)
- Configurable login banner (up to 64 characters)

POWER
- 3.3vdc from expansion slot bus
- 149 mW (typical)

MINIMUM SYSTEM REQUIREMENTS
- Gateway hardware: USR3510 with available primary slot
- Gateway system firmware: version 1.41 or higher (upgrades available)
- Peripheral hardware: RS-232 serial analog modem with access to PSTN
- Cellular device-to-device routing (for peer-to-peer operation)
- Computer hardware/software:
  - Ethernet port/web browser (for Gateway set-up),
  - RS-232 DTE port/terminal software (for Modemulator set-up)

COMMAND-LINE INTERFACE
- Compatible with common Hayes modem AT commands

REGULATORY
- UL/CSA 60950-1
- ICES-003
- CE
- FCC Part 15 Class A
- RoHS Compliant
- REACH

ENVIRONMENTAL
- **Temperature conditions:** Operating: -30 to 70° C, Non-Operating: -40 to 85° C
- **Humidity operational:** 5%-95% non-condensing

PACKAGE DIMENSIONS/WEIGHT
- 4.0 x 2.75 x 1.38 in. (10.15 x 6.95 x 3.5 cm)
- .16 lb (72.5 g)

PRODUCT DIMENSIONS/WEIGHT
- 3.75 x 2.42 x 0.95 in. (9.52 x 6.15 x 2.41 cm)
- .10 lb (45.35 g)

PACKAGE CONTENTS
- USRobotics Courier Modemulator Expansion Card

PRODUCT NUMBERS
- USR3516-EMU

WARRANTY
- Two-year limited manufacturer warranty from date of purchase

‡ *Features available on firmware version 1.0.02 and higher. Available for download at support.usr.com/support/3516-emu*

IC Approved
Approuvé par IC