Moxa Remote Connect Suite

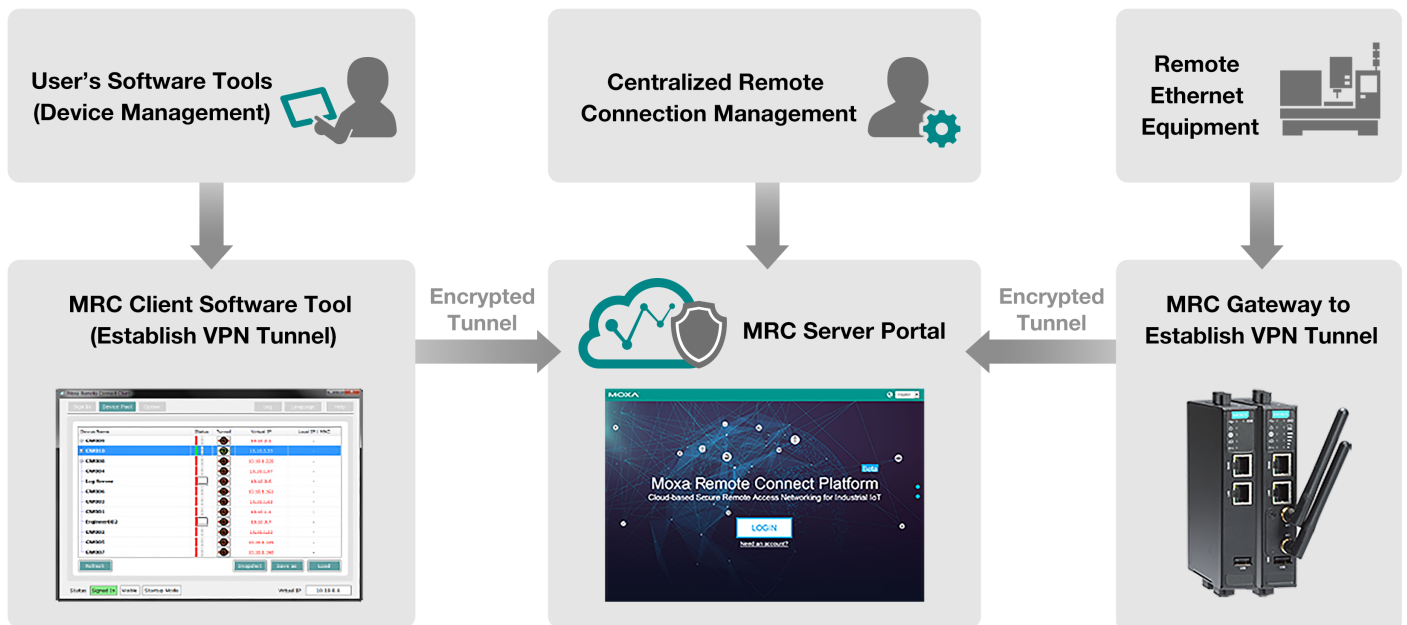*Remote connection management platforms for secure remote access*

Features and Benefits

- Security with embedded firewall and whitelist remote access control
- End-to-end data encryption
- Auto virtual IP mapping eliminates the need for field IP management
- Transparent tunnels suitable for existing software tools
- Flexibility for defining the relation between remote connections

Introduction

Moxa Remote Connect (MRC) is an easy-to-use, secure, and versatile networking solution designed to seamlessly bridge field devices, engineers, and application servers together over the Internet for industrial applications. The solution combines MRC Server, MRC Gateway, and MRC Client. The MRC Server is a connection management platform that determines how the MRC Gateways and MRC Clients are related. The MRC Gateway is a secure gateway that connects Ethernet-ready devices to MRC server portals. The MRC Client is a software tool for connecting an engineer's laptop to the MRC server portal. The MRC Server administrator manages all of these connections through a secure HTTPS web console.

User's Software Tools (Device Management)		Centralized Remote Connection Management		Remote Ethernet Equipment
MRC Client Software Tool (Establish VPN Tunnel)	Encrypted Tunnel	MRC Server Portal	Encrypted Tunnel	MRC Gateway to Establish VPN Tunnel

Featured Highlights

- Machine access is fully controlled by machine operators for on-demand maintenance service
- An embedded firewall allows remote access under whitelist control without disrupting local networks at field sites
- VPN knowledge is not required to deploy the solution
- Plug & play operation makes it easy to get up and running
- Supports existing IT cybersecurity policies
- Less effort is required from your IT engineers
- Changes to network configurations are not required at field sites
- Connect with multiple field machines simultaneously via a virtual IP mapping scheme

MOXA
Reliable Networks ▲ Sincere Service

User Scenarios

The MRC Suite supports multiple connection types and provides numerous benefits. Below are three examples where the Moxa Remote Connect Suite can benefit engineers and businesses.

On-Demand Remote Maintenance, Diagnosis, and Troubleshooting

To minimize security issues and reduce costs, Moxa Remote Connect allows engineers to build remote connections only when necessary.

Remote Monitoring Minimizes Onsite Maintenance

Moxa Remote Connect helps engineers monitor the status of machines operating at remote sites. Continual monitoring of machine status allows engineers to make adjustments to settings remotely, reducing the need for engineers to make site visits to troubleshoot and fix onsite issues.

LAN-Like Site-to-Site Secure Network Infrastructure

Moxa Remote Connect enables communication between different machines even though the machines are not at the same location. With Moxa Remote Connect, machines can transmit data to and from each other, just as though they were communicating over a local area network (LAN).

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2

Cellular Interface

Cellular Standards	EDGE, GSM, GPRS, UMTS, HSPA, LTE CAT-3
Band Options (US)	UMTS/HSPA 2100 MHz / 1900 MHz / AWS MHz / 850 MHz / 900 MHz Universal quad-band GSM/GPRS/EDGE 850 MHz / 900 MHz / 1800 MHz / 1900 MHz LTE Band B2 (1900 MHz) / LTE Band B4 (AWS) / LTE Band B5 (850 MHz) / LTE Band B13 (700 MHz) / LTE Band B17 (700 MHz) / LTE Band B25 (1900 MHz)
LTE Data Rate	10 MHz bandwidth: 50 Mbps DL, 25 Mbps UL 20 MHz bandwidth: 100 Mbps DL, 50 Mbps UL
GPRS Data Rates	85.6 kbps DL, 42.8 kbps UL
EDGE Data Rates	237 kbps DL, 237 kbps UL (Category 10, 12)
HSPA Data Rates	42 Mbps DL, 5.76 Mbps UL (Category 24, 6)
Antenna Connectors	MRC-1002-LTE-US-T: 2 SMA connector(s)

LED Interface

LED Indicators	USB, Power, Internet, Cloud, Key, Cellular Signal, Chain

USB Interface

USB Standards	USB 2.0

Input/Output Interface

Digital Inputs	+13 to +30 V for state 1 -30 to +3 V for state 0 Max. input current: 8 mA

Relays

Contact Current Rating	1 A @ 24 VDC

System Power Parameters

Input Current	0.62 A @ 12 VDC
Input Voltage	12 to 36 VDC
Power Consumption	7.44 W

Physical Characteristics

Housing	Metal
Dimensions	101 x 27 x 128 mm (3.98 x 1.06 x 5.04 in)
Weight	MRC-1002-T: 425 g (0.94 lb) MRC-1002-LTE-US-T: 470 g (1.04 lb)

Standards and Certifications

EMI	CISPR 32, FCC Part 15B Class A
EMC	EN 55032/24, EN 61000-6-2/-6-4
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 PFMF
Safety	EN 61010-2-201
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	MRC-1002-T: 954,531 hrs MRC-1002-LTE-US-T: 561,262 hrs
Standards	Telcordia (Bellcore) Standard TR/SR

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

MRC Server Software

Amazon AWS EC2	Supports Amazon AWS EC2 service (can be downloaded from AWS Marketplace)
Licensing	Apply for an MRC Server License from Moxa's channels before activating your software portal

MRC Client Software

Operating System	Windows 7/10 (32-bit or 64-bit)

Package Contents

Concurrent Online Nodes	MRC-Server License: 10 (expandable with upgrades) MRC-Server Node License 25: 25 (expansion upgrade) MRC-Server Node License 100: 100 (expansion upgrade)
Note	MRC-Server Node License 25: Requires MRC-Server License MRC-Server Node License 100: Requires MRC-Server License

Ordering Information

Model Name	10/100BaseT(X) RJ45 Ethernet port	LTE Cellular port	No. of Concurrent Online Nodes Supported	Operating Temp.
MRC-1002-T	2	–	–	-40 to 75°C
MRC-1002-LTE-US-T	2	1	–	-40 to 70°C
MRC-Server License	–	–	10	–
MRC-Server Node License 25	–	–	25	–
MRC-Server Node License 100	–	–	100	–