



MTTplus Modular Test Platform

The compact MTTplus Modular Test Platform addresses the challenges of communication service providers to increase efficiency and productivity. The flexible test platform lowers operational and capital expenditures associated with handling multiple technologies required to address today's Access, Business, Carrier Ethernet, Transport and Core services.

The MTTplus platform builds on the legacy of the legendary MTT, providing a compact, powerful and cost-effective modular test toolkit for today's wide ranging and evolving test needs. DSL is in the DNA for MTTplus, which supports business class SHDSL, residential VDSL2/ADSL2+, as well as the latest Vectoring and G.fast technologies that are enabling Service Providers to continue offering competitive services over their copper networks.

MTTplus also addresses the growing need of fiber test tools for the evolving hybrid FTTx/copper networks. Telcos can equip their field force with a test toolkit ranging from xDSL technologies as well as for FTTx installation tools such as OTDR, Fiber Link Mapper, Light Source, Optical Power Meter, VFL and Fiber Inspection Scope. Powerful Core, Transport, Metro, LAN and WLAN testing capabilities make the MTTplus platform a complete 64K to 11 Gbps testing solution for PDH/DSn, SDH/SONET, OTN, EoOTN, Ethernet, Fibre Channel and CPRI/OBSAI.

WiFi verification is becoming an inherent part of the installation process. The optional WiFi adapter, WiFi Spectrum Analyzer and network troubleshooting tools enable not only connectivity testing but also signal strength and interference analysis.

Platform Highlights

- Modern, modular test platform with a growing range of available test modules covering legacy and modern Access (copper and fiber), FTTx, Metro, Carrier Ethernet and Transport technologies
- Application-oriented GUI
- Multi-technology: xDSL, Fiber Optics, Teleprotection, Datacom, DSn/PDH, SONET/SDH, OTN, Ethernet, Fibre Channel, CPRI/OBSAI
- Expand test functions with a growing list of test modules
- Future-proof cost-effective platform
- The optional MTT carrier module brings forward compatibility to popular MTT test modules, protecting the original investment and facilitating easy transition
- GUI familiarity across different test modules and other VeEX products reduces learning curve
- Test set connectivity via USB, Ethernet, WiFi and Cellular
- Four USB ports (3x USB A and 1x micro-USB B)
- Fast and efficient test result transfer to USB memory stick
- Built-in GPS option
- Built-in Camera option for job site documentation, QR and bar codes
- Small package and light weight
- Field replaceable battery pack
- Large LCD Touch Screen and ambient light sensor

MTTplus Platform

The MTTplus modular platform can be customized by ordering one or multiple field-replaceable test modules to match specific target applications (refer to the individual test module specs for further details).

Compatibility with Existing MTT Test Modules

- Adds backward compatibility with popular MTT test modules (check with factory for modules availability)
- Assures easy transition and protects previous investment (requires MTTplus Carrier Module)

Durable and Field Upgradeable Platform

- Compact, light weight, and rugged forward-looking design
- Field replaceable battery pack

LCD Display

- 7 inch (175 mm) LCD with touch screen
- LED backlight for durability, extended battery life, and crisp image

Interfaces

- Ethernet
- USB 2.0
- Bluetooth (optional)
- MicroUSB OTG port
- Audio Jack, 2.5 mm TRS

Optional USB Transceivers

- WiFi, 3G/4G, RS232

Productivity Tools

- Web Browser
- File Manager
- VeExpress client
- R300-Server client
- Built-in camera (optional)
- LAN and WLAN troubleshooting tools

ReVeal PC Software

This companion management PC software is included standard with each test set. The ReVeal provides an easy-to-use and intuitive interface that allows you to take full advantage of your test sets by providing the following productivity tools:

- Convenient test profile management
- Flexible test results management
- Advanced report generation with html, pdf, or csv formats, combine test results, add logos and comments
- Test profiles management: Online or off-line Ethernet test profile creation, upload and download
- Compatible with Windows OS, 32 bits or 64 bits

VeExpress™

Minimize CAPEX and optimize OPEX by managing your test equipment fleet with VeExpress. It provides an all-inclusive test platform at lower cost while VeExpress manages the test sets, test functions licenses and workflow in real time.

Stop purchasing test sets loaded with extra features, just in case, or placing multiple orders with varying configurations for different user groups. Reduce your CAPEX by buying what you really need and proactively manage your software and hardware assets.

Own, Rent or Lease-to-own only the required test features, in the right quantities, to optimize your OPEX

- Buy commonly used test functions required to get the day-to-day job done
- Lease newly adopted technologies without the risk of paying for it up-front
- Rent test features used on a contingency-basis for special cases or projects. Rent ticker only starts when the feature is first assigned and used
- Share the software license pool among different users, including owned, leased and rented features.

VeExpress secure cloud-based environment provides the redundancy and speed of geographically-distributed servers around the world as well as scalability and up time. Test sets and web clients automatically connect to the closest/fastest server available.

Asset Management

- Buy, Rent or Lease new test functions
- Share test features assignment with floating licenses
- Test features are no longer tied to specific test sets, so software assets can be reallocated as needed
- Track test sets and usage
- Manage software versions to keep all test sets aligned to the latest approved software version. With time saving "Delta Push" software upgrade mechanism, no need for a full software upgrade each time
- Simple to use VeExpress user interface integrated into the TX300s to avoid getting in the way of users' daily tasks
- Intuitive web-based VeExpress client interface for users and managers

GPS Option

The optional high-sensitivity GPS module (built-in) provides precise UTC synchronization to the RXT, in the form of internal 1PPS clock synchronized to the coordinated second and time stamps.

Frequency: L1, 1575.42 MHz

Channels: 20

Sensitivity

- Cold start: -144 dBm
- Tracking: -159 dBm

Clock Output: 1PPS (internal)

Accuracy

- Time: 50 ns RMS
- Position: 5m

Acquisition Time

- Cold start: 35s
- Hot start: 1s

Recommended Antenna

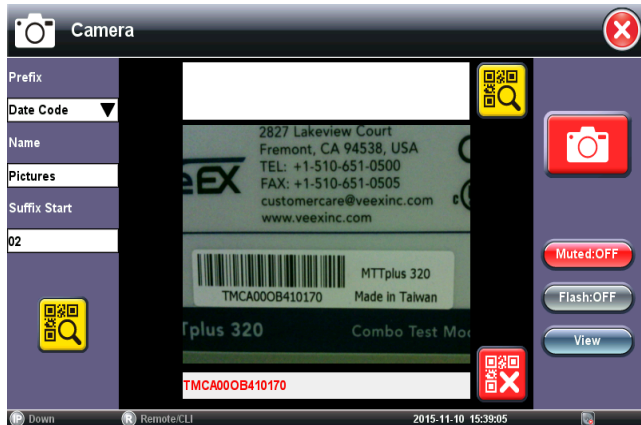
- Type: Active
- Gain: >15 dBi
- Noise: <1.5 dB
- Connector: SMA, 50 Ohms
- Power: 3.3 Vdc, 30 mA

Temperature range: 0 to 45°C

Built-in Camera Option

Augment job site documentation with before/after pictures, read QR and Bar Codes using the built-in camera

- * Auto Focus
- * LED Flash
- * 960 x 720 pixels
- * Auto QR Code or Bar Code detection and decoding
- * Dedicated camera button



Fiber Optic Tools

Digital Fiber Inspection Scope

Dirty connectors can damage or degrade the performance of expensive optical modules, or produce inaccurate results. Inspecting and cleaning patch cords and pluggable optics connectors before mating them is always recommended.

This option allows a digital video microscope probe to be connected directly to the MTTplus through a USB 2.0 port. Featuring live video feed on the MTTplus screen for visual analysis. It offers capture, compare (before and after), IEC 61300-3-3 Sect 5.4 Pass/Fail templates for SMF and MMF, save and export files to USB flash drives.

Visual Inspection

- Visual file selector
- Image comparison for before-after reports

Auto-Focus Detection and Analysis option*

Test set automatically detects when the Fiber Scope image is in-focus, captures the connector face image and analyzes it. This process is faster than complex mechanically-driven auto-focus systems as it uses human fast reaction and finesse.

- Analysis per IEC 61300-3-3
- SMF and MMF templates (Core, Cladding, Adhesive and Contact areas)
- Dots or square to highlight contamination, debris and scratches
- Report Generation

*USB Fiber Scope sold separately. Check its datasheet for details.

Optical Power Meter GUI**

Supports USB OPM dongles

The optional OPM helps checking for proper output power from optical ports before safely making an optical connection or running a test

- Numerical and bar graph readings
- Hold function
- Display Units: dBm, mW and μW
- User definable Maximum and Minimum power limits, with color-coded Pass/Fail indication
- Optical Loss Meter function with zero reference calibration
- Loss limit settable in dB, dB/km and dB/mi

** For available Wavelength Range, Calibrated Wavelengths, Power Range, Accuracy and Connectors, refer to the UPM 100 USB dongle specs

Network Troubleshooting Tools

IP Tools

Provides basic Internet connectivity to the test set with Ping and Trace Route

Net Wiz

Network Discovery Tool

- Discovery: TX Frames, RX Frames, RX Errors, Advertised Speed, Advertised Duplex, Devices found, Networks found
- Devices: Total number, Routers, Servers, Hosts
- Device Details: Attribute, IP address, MAC address, Group Name, Machine Name, Ping OK
- Networks: IP Subnets, Hosts, Domains, Hosts Names

WiFi Wiz

The WiFi Wiz function with USB WiFi adapter for 802.11 a/b/g/n/ac wireless in 2.4 GHz and 5 GHz bands makes troubleshooting WiFi connectivity issues a simple task. Scan for available networks and view all access points detailed information along with SSID, signal strength and channel allocation. Connect to Access Points with WEP/WPA or WPA2 encryption and verify IP capabilities to ensure the wireless network is properly installed and configured. A full suite of IP testing features is supported (ping, trace, web browser, etc.).

Requires compatible USB WiFi adapter for a/b/g/n/ac networks in 2.4 GHz and 5 GHz bands

Access Points scan with signal level and link quality measurement WEP/WPA1/WPA2 encryption

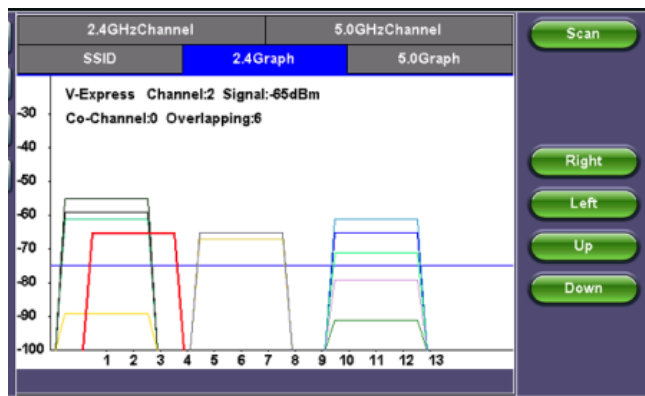
IP Connectivity test (Ping, trace route, ARPWiz, Web browser) Provides WiFi LAN access to the test set (e.g. VeExpress, R-Server, Remote Control, ReVeal)



WiFi inSSIDer

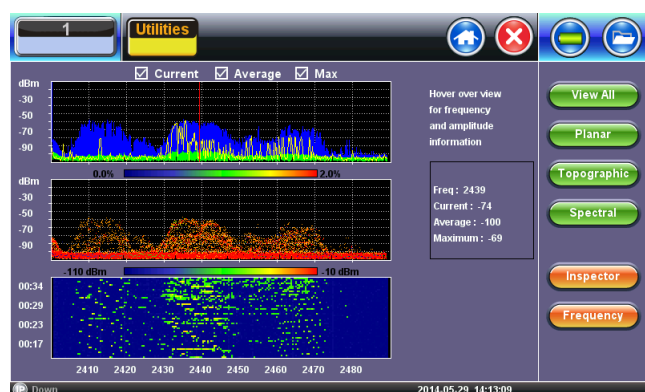
The WiFi inSSIDer provides the best tools for WiFi networks discovery and performance troubleshooting. With compatible USB WiFi adapter for 802.11 a/b/g/n/ac wireless in 2.4 GHz and 5 GHz bands the inSSIDer provides a clear picture of the environment. It helps identify poor channel placement, low signal strength and interferences in easy to understand graphs and tables.

- Requires compatible USB WiFi adapter for a/b/g/n/ac networks in 2.4 GHz and 5 GHz bands
- Network scan results in Graphical or table format
- Lists: Network names, BSSID, encryption type, channel allocation, signal strength, co-channels, and overlapping channels



WiFi Spectrum Analyzer*

The MTTplus offers a powerful portable spectrum analyzer on a USB dongle that displays all RF activity in the WiFi bands. With dual 2.4 GHz and 5 GHz bands support, the analyzer covers all 802.11a/b/g/n/ac networks and is the ideal tool for enterprise environments with a mix of wireless technologies.



With multiple graphical format displays it helps to visualize and locate RF signals in the spectrums as well as locate and eliminate interference sources (cordless phones, microwave ovens, Bluetooth devices, etc.), discover and remedy competing access points.

Supports 802.11 a/b/g/n/ac

Frequency Range: 2.400 to 2.495 GHz and 5.150 to 5.850 GHz

Amplitude Range: -100 to -6.5 dBm

Antenna: RP-SMA

Planar, topographic, spectral view

**Requires WiFi Spectrum Analyzer USB dongle*

Bluetooth Option*

Supports compatible USB Bluetooth™ dongle for file transfers to PC and mobile devices and to provide IP connectivity

** Requires compatible Bluetooth USB dongle*

**Not included*

Remote Control Option

Remote control via VNC client, web browser

Scripting via SCPI commands

Connectivity: 10/100Base-T, WiFi 802.11 a/b/g/n/ac*

**Not included*

File Manager

Profiles: Save and recall test profiles Saves results to internal SD card View, Rename, Delete and Lock profile and result files Filter and sort by Name, Test Mode, Test Type, Port, Date and Result/Profile

Report generation: Test results generation in PDF format Export test results and profiles via USB memory, Bluetooth, web browser, Data Card or ReVeal companion PC software

File Backup and Retrieve to/from USB

Screen capture: Screen shots in .bmp format

Advanced Management

This option allow users to append work order information to test results (e.g. Job ID, account, location, comments)

- Compatible with R300 Productivity Server (R-Server)
- Authorized test sets can register with specific VeSion R300 Server
- Test results can be uploaded via LAN, WiFi or cellular data connection

General

Size	188 x 168 x 80 mm (W x H x D) 7.40 x 6.61 x 3.15 in
Weight	0.84 kg (1.85 lb)
Battery	Li-ion smart battery 5800 mAh @ 10.8 VDC Field replaceable
Power Supply (AC Adaptor)	Input: 100-240 VAC, 50-60 Hz Output: 15 VDC, 5.33 A
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	5% to 95% non-condensing
Display	800 x 480 TFT 7" color display Touch screen
Management Interfaces	4 x USB Ports (3x USB A and 1x micro-USB B) 1 x 10/100 Base-T Ethernet (RJ45) Bluetooth (optional) Cellular Data Card (optional) WiFi 802.11a, b, g, n and/or ac (optional)
System Memory	Dedicated 8GB USB flash storage
Languages	Multiple languages can be supported
Ruggedness	Survives 1m drop to concrete on all sides

