



SUMMARY

By the order of GarrettCom Inc., located in Fremont, USA, IEC 61850 Functional Tests were performed on Ethernet Switch type Magnum 6k for use in substation and industrial environments.

Manufacturer : GarrettCom
Type : Magnum 6K Ethernet switch
Firmware version : 4.1

The Magnum 6k Ethernet Switch is tested for use in substations according IEC 61850, IEEE 802.1D - Media Access Control (MAC) bridges, IEEE 802.1W - Rapid Spanning Tree (RSTP), IEEE 802.1Q - Virtual Local Area Networks (VLANs).

The following tests are performed with positive test results:

Test Group	Description	Comment
VLAN handling	The goal of the functional VLAN tests is to verify the multicasting of VLAN tagged IEC 61850 GOOSE messages.	PASSED
Priority tagging	The goal of the functional priority tagging tests is to verify that higher priority messages will prevail lower priority messages. We expect on a network with mixed priority packages that no high priority packages will be dropped.	PASSED
Rapid Spanning Tree	The goal of the Rapid Spanning Tree tests is to verify the recovery of a single communication failure and to measure the recovery time and the number of packet drops.	Recovery time: 4,5 – 6,25 ms. No packet loss.

The report of performance is based on tests performed on four specimens of the product as referred above, performed by KEMA. The test results show that the specimens meet the requirements as listed above.