

EMC Engineering Test Report Ingenium Project Number: JCEAQ1090

EMC Testing of:

API Healthcare Corporation 'Prox Badge Reader'

Prepared for:

API Healthcare Corporation Attention: Mr. Gary Sutcliffe 1550 Innovation Way Hartford, WI 53027 United States of America

Test Date(s): June 17th through June 25th, 2009

In accordance with:
U.S. Code of Federal Regulation, Title 47, part 15
Subpart 209, Radiated Emission Limits, General Requirements.

All results of this report relate only to the items that were tested.

This Test Report may not be reproduced, except in full, without written approval of Ingenium Testing, LLC.



TABLE OF FIGURES

FIGURE 1: THE API HEALTHCARE HID PROX BADGE READER MODULE	4
FIGURE 2: THE API HEALTHCARE MODEL AP500 BADGE READER USED AS A HOST CONTROLLER DURING TESTING	5
FIGURE 3: INTER-RELATIONSHIPS BETWEEN THE EUT AND OTHER PERIPHERAL OR SYSTEM COMPONENTS	6
FIGURE 4: EUT TRANSMIT MODULE IN 'VERTICAL' ORIENTATION.	7
FIGURE 5: EUT TRANSMIT MODULE IN 'HORIZONTAL' ORIENTATION	8
FIGURE 6: EUT MODULE EMBEDDED INSIDE THE HOST KEYPAD AND CARD READER (OPENED FOR PHOTO)	9
FIGURE 7: EUT SHOWN ON PEDESTAL, INSIDE TEST CHAMBER	10
FIGURE 8: EUT SETUP DURING CONDUCTED RF EMISSIONS TESTING, WITH AC SUPPLY PROVIDING POWER-OVER-ETHERNET.	
FIGURE 9: CLOSE UP VIEW OF CONDUCTED RF EMISSION TESTING, SHOWING EUT IN 'MODULAR TRANSMITTER' TEST SETUP	12
FIGURE 10: CLOSE UP VIEW OF CONDUCTED RF EMISSION TESTING, SHOWING THE REAR OF THE EUT, THE ETHERNET CABLE AND THE FI	RRITE
CLAMP APPLICATION ACCORDING TO THE MANUFACTURER'S INSTRUCTION MANUAL	13
FIGURE 11: EUT TRANSMIT MODULE IN 'VERTICAL' ORIENTATION, DURING OCCUPIED BANDWIDTH TESTS.	14
FIGURE 12: EUT TRANSMIT MODULE IN 'VERTICAL' ORIENTATION, DURING BAND-EDGE TESTS.	15

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 3 of 15



Figure 1: The API healthcare HID Prox Badge Reader Module

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 4 of 15



Figure 2: The API Healthcare model AP500 Badge Reader used as a host controller during testing.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 5 of 15

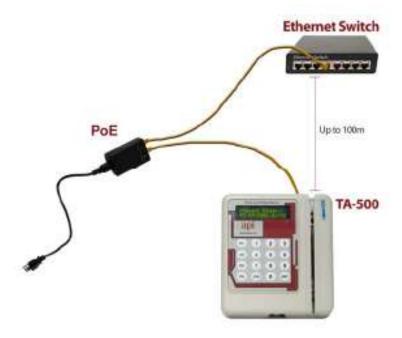


Figure 3: Inter-relationships between the EUT and other Peripheral or System components

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 6 of 15



Figure 4: EUT transmit module in 'Vertical' orientation.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 7 of 15



Figure 5: EUT transmit module in 'Horizontal' orientation.

.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 8 of 15



Figure 6: EUT module embedded inside the host keypad and card reader (opened for photo).

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 9 of 15



Figure 7: EUT shown on pedestal, inside test chamber.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 10 of 15



Figure 8: EUT setup during Conducted RF Emissions testing, with AC supply providing Power-Over-Ethernet.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 11 of 15



Figure 9: Close up view of Conducted RF Emission testing, showing EUT in 'Modular transmitter' test setup.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 12 of 15



Figure 10: Close up view of Conducted RF Emission testing, showing the rear of the EUT, the Ethernet cable and the ferrite clamp application according to the manufacturer's instruction manual.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 13 of 15



Figure 11: EUT transmit module in 'Vertical' orientation, during Occupied Bandwidth tests.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 14 of 15



Figure 12: EUT transmit module in 'Vertical' orientation, during Band-Edge tests.

Prepared For:	API Healthcare	
Test Report #:	JCEAQ1090 v1_1	Page 15 of 15