

CHARACTERIZATION AND IDENTIFICATION RANGE PERFORMANCE IN THERMAL CAMERA USING IMAGE PROCESSING

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Abstract: On remote sensing activities, the knowledge of thermal cameras capabilities is fundamental to guarantee image fidelity, quality and, consequently, contributes to the mission planning. Another important parameter that has to be taken in account is the target identification performance, in order to improve the mission results. The present study estimated the minimum resolvable temperature differential (MRTD) from the systems modulation transfer function (MTF) and noise equivalent temperature difference (NETD) of a commercial thermal camera, using specific image processing software. It was possible to propose a minimum identification distance of a desired target, in accordance with its temperature and spatial dimension.